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ABSTRACT

This report examines the impact of teacher quality on student achievement in Canada, analyzing current research, practices, and innovations to provide a better understanding of the complexity of teaching and effective teacher deployment. The nine chapters focus on: (1) "Introduction"; (2) "Indicators of Teacher Quality" (defining teacher quality and the effect of teacher quality on student achievement); (3) "Supply of Teachers" (teacher shortage or distribution, availability of Canadian data sources of teachers in Canada, factors impacting Canada's teacher supply and demand teacher participation in the workforce, and strategies to balance teacher supply and demand); (4) "Initial Preparation of Teachers" (e.g., preservice training; determination and evaluation of program curriculum and delivery; and typical teacher education program components); (5) "Hiring and Assignment Practices" (e.g., teacher federations and collective agreements, the role of tenure, the posting and assignment process, and innovations in hiring and assignment to increase teacher quality); (6) "Professional Development" (e.g., link between professional development and teacher quality, funding for staff development, and innovative practices); (7) "Evaluation" (e.g., why teacher evaluation is important for teacher quality and peer assistance); (8) "Compensation" (why pay matters, current compensation practices, and incentives); and (9) "Policy Implications." (Contains approximately 120 references.) (SM)

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Teacher Quality in Canada

Susan M. Phillips

Helen Raham, Editor

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Dr. Phillips is an educator with over twenty-five years of experience in the public school system. She obtained her B.Ed. in Secondary Education and M.Ed.in School Counselling from the University of Victoria and her Ed.D. in Educational Leadership from Brigham Young University. She has worked in teaching, counselling, consultant and administrative positions in schools and at the district level as well as being an university sessional lecturer. Her experience encompasses many different types of school organizations and programs including those targetting at-risk adolescents and adult learners.

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Executive Summary

Teachers are one of the most valuable resources any nation possesses. Their task is a much more complex job than is appreciated by the general public. *Teacher Quality in Canada* takes an in-depth look at the considerable, documented impact of teacher quality on student achievement. Through analysis of current research, practices and innovations, the study provides a better understanding both of the complexity of teaching and effective teacher deployment.

Teacher quality may be explored in three broad areas. The first measure of quality is the characteristics the teacher brings to the classroom. The second measure of quality is the teaching that occurs in the classroom. The third aspect, which is extensively examined in this report, is the environmental conditions and practices that foster excellence in teaching.

New research clearly correlates what teachers know and do with student learning. By means of value added studies, Sanders and other researchers have been able to isolate teacher effects independent of external variables such as socioeconomic status of students. With this new knowledge, student achievement can no longer be explained simply as resulting from student and/or school characteristics.

Current data and research methods do not sufficiently separate the effects of different teacher characteristics, but the following variables are identified as having a degree of influence on student achievement: cognitive ability, focused pre-service training, experience, content knowledge related to subject taught, certification, and professional development.

The supply and demand of teachers has a significant impact on teacher quality. In Canada, the issue appears to currently be one of distribution. Overall, there are a sufficient number of teachers but there are specific shortages in some geographic areas and in some subject areas. A greater proportion of the teaching population is over the age of 50 and the education sector has the lowest median age of retirement of any industry in Canada. The gaps in Canadian statistics regarding supply and demand need to be addressed in order to develop appropriate data-based national/regional strategies.

The initial preparation of teachers is a critical aspect of quality, as knowledge of how students learn, teaching methods and subject content correlates positively with student outcomes. Teacher certification is a provincial responsibility, and the content of teacher preparation programs varies widely. In the absence of national standards or comparative evaluations, post-secondary institutions exercise de facto control over the content of teacher preparation programs although Ontario has recently introduced two types of testing for teachers. The research is inconclusive on the effects of alternate credentialing for teachers such as that being used to meet unique and emerging needs.

Beginning teachers who are mentored in their first years have proven more effective overall, and induction programs are shown to help retain teachers in the profession. Examples are provided of programs that result in lower attrition of beginning teachers, higher levels of competence, and greater selectivity.

Although personnel practices are critical to the quality of the workforce, these are generally driven by collective agreement language rather than classroom needs. The report examines tenure, seniority, hiring and assignment issues, and finds Canadian public education systems generally provide few incentives to ensure that skills and experience are in place where they can have the greatest impact on student achievement.

Tenure raises the importance of effective recruitment and selection, as tenured teachers are rarely dismissed for teaching performance. The prominence of seniority in teacher assignment has yet to be addressed in Canada. Longer probationary periods allow an opportunity for mentoring programs and more thorough evaluation of suitability for a teaching career. Shorter dismissal processes for teachers who do not respond to remediation would also support quality.

Alternate ways of scheduling time in order to maximize the efficiency and effectiveness of teaching staff also hold potential. This includes providing opportunity for collaboration, balancing the calendar to maximize student learning and minimize teacher stress and moving teaching to a year-round occupation in order to provide additional, continuous professional development. Differentiated staffing may also provide more efficiency in delivering some programs.

On-going professional development expands the capacity of teachers to adapt to new challenges and develop the requisite skills and knowledge. How-

ever professional development has largely been left up to the discretion of individual Canadian teachers rather than a collaborative model which meets agreed site-based instructional goals. This quality goal is difficult to attain given contract language, underfunding, time constraints and a general lack of broader public support/understanding of the critical need for teacher professional development. Innovative practices, such as the development of Teacher Led Professional Development Centres in the US, provide models for much greater improvement of this critical aspect of teacher quality.

Teacher evaluation practices should provide both improvement information and accountability for performance. Evaluations ensure that students are being provided with adequate learning opportunities and the public is provided with quality assurance. Reliable, relevant, consistent data collection is critical to the effectiveness of this process and current evaluation processes lack the rigor associated with other professional and technical occupations. Teacher evaluation processes in Canada are largely prescribed by collective agreement language that limits the content, use, scope and consequences of the results. Peer Assistance and Peer Review are two programs that hold promise for teacher quality improvement.

While pay may not act as a dominant motivator, it is still relevant to teacher quality and can be an effective component of a larger strategy to improve teacher quality, particularly in areas where other professional supports have been provided. Salary grids in Canada stress seniority and pre-service preparation, with limited recognition for subject specialization, difficult assignments, and professional growth.

Incentives in the form of positive motivational influences such as enhanced working conditions or monetary bonuses are a means of increasing productivity. Traditionally these incentives have been limited to recruitment and retention, ignoring the potential benefits of their strategic use to enhance the educationally appropriate distribution of teachers or to focus teachers on acquiring desirable skills. Such incentives include compensation for additional training or time and/or responsibilities, and incentives for hard-to-staff assignments. Incentives may also be structured to rewards for individual teachers or the school for progress made. Cooperative Performance Incentive plans (CPI) are promising systems that reward the attainment of defined school-wide educational goals. Properly and fairly implemented, student achievement-focused incentive programs can be expected to increase costs, at least in the short-term. The research is clear, however, that pay reform is not a magic solution to overcome our teaching quality challenges.

The report concludes with a number of recommendations to support teacher quality in Canadian classrooms. Among these are:

*Evaluation and improvement of teacher preparation programs, based on research and practice;

*Widespread establishment of teacher mentoring and induction programs;

*Organization of hiring and assignment practices to support teacher quality assurance;

*On-going, school-embedded professional development designed for its impact on student learning;

*Regular evaluations throughout a teacher's career that are focused on quality recognition and control; and

*Experimentation with compensation incentives to encourage productivity and the application of specialized skills and knowledge.

I Introduction

What is more important to any nation than the education of its youth? One of the main determinants of that education is the quality of the country's teaching force. Teaching quality in Canada is so important to teachers, school districts, teacher training institutions, governments and the public that these individuals and groups must set aside historical precedents to explore new routes to enhance teacher quality in the new millennium. In this report we will look at many aspects of teaching quality in Canada in the K-12 public school system.

What teachers know and can do makes the crucial difference in what children can learn.[2]

As Canada enters the 21st century, it is timely to determine how best to use our resources for maximum productivity. In light of the world economic situation and our desire to do the best for our youth to prepare them for the future, examination of our country's teaching force is crucial. Educational research shows the importance of teachers in the achievement of students and ways that teaching can be strengthened. What we need to do is apply these findings so that students in every classroom have access to high quality learning opportunities.

Some of the areas that we will be examining include those that Fullan (2001) believes need reforming: *recruitment, selection, status and reward, redesign of initial teacher education and induction, continuous professional development, standards and incentives for professional work, and (most important of all, perhaps) changes in the daily working conditions of teachers.*[1]

After referencing the current Canadian situation, innovative programs are cited to extend our understanding of what could be happening in our public education system. By examining these innovations and adapting the best of them to our context, we could change the nature of education in our country.

The following chapters each address a discrete but interrelated aspect of teacher quality in Canada. Each chapter could have been a book as there are many references, studies and examples pertinent to each concept. Readers are encouraged to seek out the primary sources as cited if details of a specific program or study are desired.

---

1 Fullan, M. (2001). *The new meaning of educational change* (third edition). Toronto, Ontario: Irwin Publishing. p. 265.

2 National Commission on Teaching and America's Future. (1996, September). *What matters most: Teaching for America's future*. New York: NCTAF.

Chapter IX- Policy Implications attempts to summarize the directions that could be pursued in order to enhance teacher quality in Canada. These policy recommendations are based on the existing educational research base and current best practice. The uniqueness and commonalities of the public K-12 educational system in each province and territory have been considered, as has been the willingness of all involved with the Canadian education system to enhance student learning.

II Indicators of Teacher Quality

Differences in teacher expertise are a major reason for the difference in learning opportunities across schools and classrooms.[2]

What is the nature of teaching? What is teacher quality? What does the research show about the relationship of teacher quality to student achievement? How important are the following factors: certification, university preparation, years of experience? How does out-of-field teaching affect teacher quality?

The Nature of Teaching

Everyone believes he or she knows what it is like to be a teacher. Members of our society spend more contact time with teachers in their youth than with any other occupation. As a result of this exposure, many people believe they know how to evaluate the effectiveness of teachers from their own life experience.

Studies of teaching describe it as complex work characterized by simultaneity, multidimensionality, and unpredictability.[1]

As Little (1999) notes, *the most common organization of schools – independent classrooms linked by a common parking lot – leaves one with the impression that teaching is a relatively straight-forward activity,*[3] however, *teaching is more complex and difficult than we would be led to believe by looking at the typical organization of teachers' work. Nor can its complexities be fully anticipated or resolved by whatever prior preparation teachers bring to the classroom. Teaching requires continual discovery and judgment.*[4]

This multi-faceted complexity makes teaching quality a challenge to define and measure.

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[1] Darling-Hammond, L. (1997). *The Right to Learn: A Blueprint for Creating Schools that Work*. San Francisco: Jossey-Bass, p. 69.

[2] Darling-Hammond, L. (1997). *The Right to Learn: A Blueprint for Creating Schools that Work*. San Francisco: Jossey-Bass, p. 271.

[3] Little, J.W. (1999). Organizing Schools for Teacher Learning, in Darling-Hammond, L. and Sykes, G. (Eds.) *Teaching as the Learning Profession: Handbook of Policy and Practice of Education*, San Francisco: Jossey Bass, p. 67.

[4] Ibid., p. 67.

Defining Teacher Quality

There have been many attempts to define teacher quality. Perhaps the most helpful analysis is the perspective of Kaplan and Owings:

Two broad areas define teacher quality: teacher preparation/qualifications and teaching practices. Using the terms teacher quality and teaching quality separately, however, permits clearer discussion and purposeful action. Teacher quality concerns the inputs that teachers bring to the school, including their demographics, aptitude, professional preparation, college majors, SAT and teacher examination scores, teacher licensure and certification, and prior professional work experiences. Teaching quality refers to what teachers do to promote student learning inside the classroom. Teaching quality includes creating a positive learning climate, selecting appropriate instructional goals and assessments, using the curriculum effectively, and employing varied instructional behaviours that help all students learn at higher levels.[6]

The teacher remains the key . . . Debates over educational policy are moot if the primary agents of instruction are incapable of performing their functions well.[5]

Linda Darling-Hammond provides a generic checklist that covers the range of competencies expected in a teacher (see Figure 2.1).

The NBPTS (National Board for Professional Teaching Standards) includes five core propositions in its policy statement:

- *teachers are committed to students and their learning.*
- *teachers know the subjects they teach and how to teach those subjects to students.*
- *teachers are responsible for managing and monitoring student learning.*
- *teachers think systematically about their practice and learn from experience.*
- *teachers are members of learning communities.*[7]

[5] Shulman, L. (1983). Autonomy and Obligation. In L. Shulman & G. Sykes (Eds.), *Handbook of teaching and policy*. White Plains, New York: Longman, p. 504.

[6] Kaplan, L. & Owings, W. (2001, November). Teacher Quality and Student Achievement: Recommendations for Principals. *NAASP Bulletin*, 85(628), p. 1.

[7] Bond, L., Smith, T., Baker, W. & Hattie, J. (2000, September). *The Certification System of the National Board for Professional Teaching Standards: A Construct and Consequential Validity Study*. Center for Educational Research and Evaluation: The University of North Carolina at Greensboro, p. 27.

Figure 2.1 - What Teachers Need to Know and Be Able to Do

What Teachers Need to Know and Be Able to Do

- to understand subject matter thoroughly enough to organize it so that students can create useful cognitive maps of the terrain they are studying.
- to have pedagogical content knowledge (Shulman, 1987) that enables teachers to represent ideas so that they are accessible to others.
- to have knowledge of development so that teacher can frame productive experiences for students
- to have an understanding of differences that may arise from culture, language, family, community, gender, prior schooling, and the other factors that shape people's experiences, as well as differences that may arise from the intelligences students rely on, their preferred approaches to learning, and any specific learning difficulties they may have.
- to build a teacher's pedagogical learner knowledge, which grows as teachers examine how particular learners think and reason, how they learn best, and what motivates them.
- to have an understanding of motivation.
- to possess several kinds of knowledge about learning.
- to assess students' knowledge and approaches to learning
- to command teaching strategies that address a variety of ways to learn and a variety of purposefully selected goals for learning.
- to know about curriculum resources and technologies.
- to know about collaboration.
- need to be able to analyze and reflect on their practice, to assess the effects of their teaching and then to refine and improve their instruction. (Darling-Hammond 1997)[8]

[8] Darling-Hammond, L. (1997). *The Right to Learn: A Blueprint for Creating Schools that Work*. San Francisco: Jossey-Bass, 1977, p. 294-7.

Teaching as A Profession

While most people percieve teachers as professionals, Darling-Hammond (1997) reflects that teaching is not yet a profession by sociologists' definition. A profession *assumes responsibility for developing a shared knowledge base for all its members and for transmitting that knowledge through professional education, licensing, and ongoing peer review*,[9] in a manner that is client oriented and knowledge based. Society grants substantial autonomy to a profession that demonstrates its practitioners are competent and committed and will act knowledgeably and ethically to contribute to public safety and well-being. *Consequently, professions attach great importance to preparation, licencing, selection, induction, and evaluation of practitioners and to issues of research and knowledge building. They also use strategies like accreditation of professional schools and peer review within practice sites as means to review, critique, and improve practice.*[10] The American Federation of Teachers echoes these ideas, that all the classical attributes of a profession are not yet characteristic of teaching today. Albert Shanker, former AFT president, defines a true profession:

An occupation must: have a distinct body of knowledge—acknowledged by practitioner and consumer alike— that undergirds the profession and forms the basis of delivering high-quality services to clients; define for itself the nature of training required of those who wish to enter the field; require rigorous training to acquire the knowledge and skills necessary to practice the profession; control the standards for entry into the profession; have its practitioners be a major voice in determining working conditions; have its practitioners exercise independent judgement about client needs to ensure those needs are met; evaluate the performance of practitioners and remove from the profession those whose performance fall below standards; require that practitioners continue to learn about advances in the field; induct its members into the profession in a systematic and rigorous fashion; and have the respect of the larger society.[11]

[9] Darling-Hammond, L. (1997). *The Right to Learn: A Blueprint for Creating Schools that Work*. San Francisco: Jossey-Bass, p. 298.

[10] Ibid., p. 298-9.

[11] American Federation of Teachers. (2000, April). *Building a Profession: Strengthening Teacher Preparation and Induction*.

While teaching is maturing towards being a true profession, Carnine (2000) explains that the process would be hastened if ideology was abandoned and evidence was embraced.

Findings from carefully controlled experimental evaluations must trump dogma. Expert judgements should be built on objective data that can be inspected by a broad audience rather than wishful thinking. Only when the profession embraces scientific methods for determining efficacy and accepts accountability for results will education acquire the status – and the rewards – of a mature profession. (Carnine, 2000)[12]

In the last decade, in particular, we are beginning to implement research methods such as value-added studies that produce objective data that can measure instructional efficacy and quality teaching.

The Effect of Teacher Quality on Student Achievement

Students' test scores can mean the difference between a remedial label and the gifted track – between entry into a selective college and a lifetime at McDonald's. (Haycock, 1999).[14]

Kaplan and Owings (2001) divide teacher quality into two broad areas: teaching quality - what teachers do to promote student learning within the classroom or teaching practice, and teacher quality - the inputs the teacher brings to the school. The next two sections focus on teaching quality and teacher quality as defined above.

Teaching Quality Variables

There are many studies that demonstrate that what teachers know and do make a difference to student learning. The landmark study by Sanders in Tennessee is believed to be the largest longitudinal database of student achievement in the United States. Sanders uses value-added methods to determine *teacher effectiveness independent of external variables such as socioeconomic status or the occasional low performance day of an individual student.*[13]

[12] Carnine, D. (2000). *Why Educational Experts Resist Effective Practices*. Washington, DC: Fordham Foundation, p. 10.

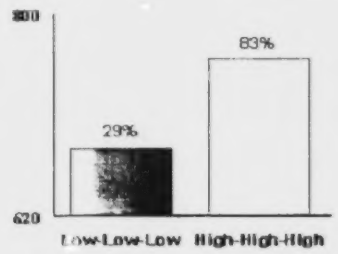
[13] Doorey, N. & Noble, A. (1999, April). Ensuring Teacher Quality and Supply: A State and Regional Approach: Issues in Brief. *NASBE*, 19(1), p. 1-2.

[14] Haycock, K. (1998, Summer). Good teaching matters...a lot. *Thinking K-16*: A publication of the Education Trust 3(2), p. 7.

Value-added methods are a new and more powerful way of addressing the question of whether teachers matter. Value-added methods examine students' gains from year to year rather than their scores at a single point in time. Teachers who are adding value to student achievement will be those whose students gain most over the school year. Thus if a math teacher has children who start the year at the 95th percentile and end the year at the 90th percentile, she would not be considered an exemplary teacher even if the performance of her students was the highest in the district. In contrast, a teacher who raised her students' performance from the 45th to the 60th percentile over the course of a year would be deemed very effective even if her children performed below the average in the district. Value-added methods require that children be followed longitudinally, i.e., the same children must be tested each year and identified uniquely in the resulting database.[15]

Sanders and Rivers (1996)[16] employed value-added methods to examine the cumulative effects of teacher quality on academic achievement, by tracking the progress of grades 3,4, & 5 math students for three years assigned to the most effective (top 20%) and the least effective (bottom 20%) teachers in two Tennessee school districts. Figure 2.2 illustrates the results.

Figure 2.2 - Sanders and Rivers (1996) Study



Children assigned to three effective teachers in a row scored at the 83rd percentile in math at the end of 5th grade, while children assigned to three ineffective teachers in a row scored at the 29th percentile.[17]

Jordan, Mendro, & Weerasinghe[18] (1997) in Dallas conducted another study on math achievement using value-added methods and similar results to Sanders' study were documented (see Figure 2.3).

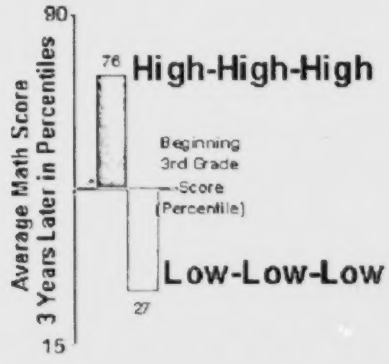
[15] Whitehurst, G. (June 2002). Research on Teacher Preparation and Professional Development. White House Conference on Preparing Tomorrow's Teachers (March 2002) as written in *Appendix C Title II, Part A. Improving Teacher Quality State Grants Non-Regulatory Draft Guidance*, United States Department of Education, p. 74.

[16] Sanders, W. and Rivers, J. (1996). *Cumulative and Residual Effects of Teachers on Future Student Academic Achievement.* Knoxville: University of Tennessee Value-Added Research and Assessment Center.

[17] Whitehurst, G. (June 2002), p. 75.

[18] Jordan, H.R., Mendro, R., & Weerasinghe, D. (1997). *Teacher efects on longitudinal student achievement: A preliminary report on research on teacher effectiveness.* Paper presented at the National Evaluation Institute, Indianapolis, Indiana.

Figure 2.3 - Jordan, Mendro, & Weerasinghe (1997) Study



Whitehurst (2002) explains that these studies overestimate the actual effect of teachers on academic achievement because the assignment of students to teachers from year to year is essentially random, at least in elementary school (Rowan[19], 2002). The typical child is not lucky enough to get 3 highly effective teachers or unlucky enough to get 3 highly ineffective teachers in a row. However, these studies demonstrate persuasively that the potential effect of teacher quality on academic achievement is quite high.[20]

A study in New York City that controlled for demographic factors compared effective vs. low-achieving New York elementary schools found *differences in teacher quality and experience accounted for 90 percent of the variance in student reading and mathematics scores at grades 3,6, and 8. Far more than any other factor, teacher expertise made the difference in what children learned*[21].

[19] Rowan, B.(2002). *What Large -Scale, Survey Research Research Tells Us About Teacher effects on Student Achievement: Insights From the Prospects Study of Elementary Schools.* Ann Arbor: University of Michigan (unpublished).

[20] Whitehurst, G. (June 2002). Research on Teacher Preparation and Professional Development. White House Conference on Preparing Tomorrow's Teachers (March 2002) as written in *Appendix C Title II, Part A. Improving Teacher Quality State Grants Non-Regulatory Draft Guidance*, United States Department of Education, p. 76.

[21] Armour-Thomas, E., Clay, C., Domanico, R., Bruno, K., & Allen, B. (1989). *An Outlier Study of Elementary and Middle Schools in New York City: Final Report.* New York: New York City Board of Education.

An analysis of 900 Texas school districts by Ferguson found that teachers' expertise accounted for about 40% of the measured variance in math and reading achievement at grades 1-11, more than any other factor. Ferguson concludes *what the evidence here suggests most strongly is that teacher quality matters and should be a major focus of efforts to upgrade the quality of schooling. Skilled teachers are the most critical of all schooling inputs.*[22] That children learn much more in some classrooms than others even when they are in the same school is supported also by recent research from Boston Public Schools, (1998) and Hanushek (1986). Doorey and Noble (1999) note that:

The surprises are in the magnitude of the difference and in the poor correlation between principals' evaluations of teacher effectiveness and actual student achievement gains on standardized tests .

Equally compelling is Sanders' data that race and socioeconomic status are not barriers to learning. Highly effective teachers were found to be effective regardless of racial composition of the class, poverty level of the students, heterogeneity of the class, school climate, or class size. "These other factors pale to triviality in comparison to teacher effectiveness," he states (Sanders, 1999). Sanders' point is not that factors such as poverty make no difference to overall achievement, but that effective teachers can still achieve a year's worth of growth, starting from where the children are when they enter the classroom. "If two children [of different races or SES] enter at the same level, they will leave at the same level," he has found.[23]

These studies strongly suggest that no longer can student achievement be explained away solely as a result of student and school characteristics. The teaching quality of individual teachers has been shown to be a major factor in the variance in student achievement and that the effects of quality teaching can affect student achievement beyond the year the student is assigned to a specific teacher.

[22] Ferguson, R. (1991, Summer) Paying for public education: New evidence on how and why money matters. *Harvard Journal on Legislation*, 28(2), p. 490.

[23] Doorey, N. & Noble, A. (1999, April). Ensuring Teacher Quality and Supply: A State and Regional Approach: Issues in Brief. *NASBE*, 19(1), p. 1-2.

Teacher Quality Variables

We now turn our attention briefly to some of the teacher characteristics or inputs the individual brings to the school: qualifications, credentials, aptitude, and prior professional work experience.

Certification

It is not simple to compare the effects of certified versus uncertified teachers for a variety of reasons including the compounding effects of experience; most uncertified teachers are beginners as most jurisdictions do not allow for long term employment of uncertified teachers. Therefore the research concentrates instead on the differences in efficacy between regular and alternate certified teachers. Even here there are significant differences of opinion as to the comparative value of regular and alternate certification programs.[24] More research is needed to determine if there are significant differences in student achievement attributable to the teacher's certification method.

Teacher Aptitude

The quality of the teacher trainee pool appears to have a significant effect on future student achievement. Whitehurst concludes that valid measures of teacher verbal or cognitive ability account for more variance in student achievement than any other measured characteristic of teachers in research studies.[25] He finds this disturbing, as in the United States SAT or ACT scores for teacher graduates are lower than for social science or math/science college majors. Comparable data for teacher verbal or cognitive ability do not appear available for Canada.

Master's Degrees

It is a common assumption - and teacher compensation plans reinforce this - that a master's degree increases teacher efficacy. Research does not show significant differences in student achievement if a teacher has a master's degree.[26] The research, however, did not always differentiate between a master's degree in education or the teacher's teaching area, as opposed to any degree at the masters level.

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[24] Whitehurst, G. (June 2002). Research on Teacher Preparation and Professional Development. White House Conference on Preparing Tomorrow's Teachers (March 2002) as written in *Appendix C Title II, Part A. Improving Teacher Quality State Grants Non-Regulatory Draft Guidance*, United States Department of Education, p. 77.

[25] Ibid., p. 78.

[26] Ibid., p. 79.

Years of Teaching Experience

Research examining teacher experience on student achievement suggests a positive correlation. Rowan (2002) found a significant effect on elementary school reading and math achievement with greater effects in the upper elementary grades and Greenwald, Hedges and Laine [27](1996) completed a meta-analysis of the literature on school resources and student achievement, which suggests significant effects of teacher experience upon student achievement. A significant number of the original novice teachers have self-selected to leave the teaching profession before their fifth year of teaching, the remaining teachers have gained more experience with teaching, and they have continued to develop their skills and knowledge through professional development and interactions with their colleagues and through formal evaluation processes.

Intensive and focused in-service training

There are only a few high-quality studies directly relating teacher professional development experiences to student outcomes (Cohen and Hill[28], 2000; Wiley and Yoon[29],1995; Brown, Smith, and Stein[30],1996; and Kennedy[31] ,1998), but they support the value of professional development focused on academic content and curriculum aligned with standards-based reform to change teaching practice to improve student achievement.

Two Comparisons of the Relative Effects of Teacher Variables

As the current data and research methods used in studies of teacher variables are not precise enough to unequivocally determine the exact influence and interrelationship of different factors, we will present for your examination two representations. Whitehurst [32] (Figure 2.4) and The Education Trust[33] (Figure 2.5) have each examined the relative effects of different teacher variables on student achievement.

[27] Greenwald, R., Hedges, L., & and Laine, R. (1996, Fall). The effects of school resources on student achievement. *Review of Educational Research*, 66(3), 361-396.

[28] Cohen, D. and Hill, H. (1997, April). *Instructional Policy and Classroom Performance: The Mathematics Reform in California.* Paper presented at the American Educational Research Association, Chicago, Illinois.

[29] Wiley, D. & Yoon, B. (1995). Teacher reports of opportunity to learn: Analyses of the 1993 California Learning Assessment System. *Educational Evaluation and Policy Analysis*, 17 (3), pp. 355-370.

[30] Brown, C., Smith, M., & Stein, M. (1996, April). *Linking teacher support to enhanced classroom instruction.* Paper presented at the American Educational Research Association, New York, New York.

[31] Kennedy, M. (1998, April). *The relevance of content in in-service education.* Paper presented at the American Educational Research Association, San Diego, California.

[32] Whitehurst, G. (June 2002). Research on Teacher Preparation and Professional Development. White House Conference on Preparing Tomorrow's Teachers (March 2002), United States Department of Education, p. 78.

[33] Adapted from the Education Trust. (2000). *Good Teaching Matters* (PowerPoint Presentation Slide 39). Retrieved from http://www.edtrust.org/main/main/products.asp

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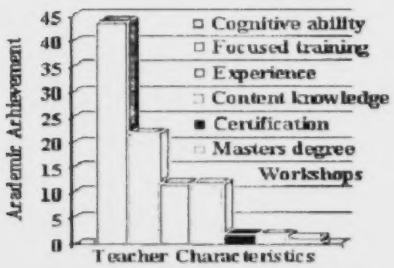
Figure 2.4 - Summary of the effects of teacher characteristics on student achievement (Whitehurst 2002)

Summary of the effects of teacher characteristics on student achievement (Whitehurst 2002)

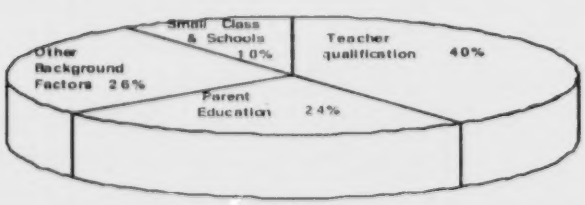


The figure summarizes Whitehurst's perception of the relative strength of each of the dimensions of teacher quality in the literature he reviewed. The heights of the bars in the graph should not be taken as exact or specific to any particular research study. Rather they are intended simply as a graphic depiction.

The Education Trust has also provided a graphic illustration of the relative influence of factors they deem important for student achievement (see Figure 2.5). Teacher qualification for this chart includes education (master's degree), experience, and expertise (licensing examination scores); parent education represents % of parents with college education); and, other background factors include poverty, language, background and family characteristics.

Figure 2.5 - Average Proportion of Variance in Student Test Scores (Grades 1-7) Explained By: (Education Trust 2002)

Average Proportion of Variance in Student Test Scores (Grades 1-7) Explained By:



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Out-of-field Teaching

Out-of-field teaching is highly problematic for student learning [34] as studies have proven that student achievement is significantly correlated with teacher experience and academic preparation. This is true especially in mathematics and sciences, the subject areas most often researched for out-of-field assignment correlations.[35 & 36]

There are a number of causes of out-of-field teaching. Grimmett believes it *occurs because of legislated changes, curriculum compression, and sometimes because of teachers presuming they can teach subjects for which they are academically unqualified.*[37] Ingersoll explains that there are two perspectives on the cause and consequences of underqualified or out-of-field teaching. The teacher deficit perspective says inadequate teacher supply and training lead to underqualified teachers, especially in disadvantaged schools. The second, or organizational perspective, hypothesizes that administrative practices and organizational characteristics lead to underqualified teachers, especially in disadvantaged schools.

Given that the research shows that teacher and teaching quality is the most important variable in student achievement, it is imperative that this become a priority for all who are involved in Canadian K-12 public education. The following chapters will address how best to prepare, recruit, assign, retain, evaluate, compensate and support teachers to be the best they can be.

[34] Grimmett, P. & Echols, F. (2001, May). *Teacher and administrator shortages in changing times: Avoiding the dilemma of saving the train from hijackers to find there's no train left!* Paper presented at the 2001 PCERA Symposium: Teacher Education/Educator Training: Current Trends and Future Directions, Laval University, Quebec City, p.8.

[35] Ingersoll, R.M. (2002, January). *Out-of-field teaching, educational inequality, and the organization of schools: An exploratory analysis.* Centre for the Study of Teaching and Policy, Seattle, WA: University of Washington.

[36] Fetler, M. (1999). High School Staff Characteristics and Mathematics Test Results. Education Policy Analysis Archives, 7(9).

[37] Grimmett & Echols, (2001), p.8.

III Supply of teachers

Issues surrounding teacher supply and demand are front and centre at the present time. An examination of some of the literature in this area suggests that the problem is not so much a teacher shortage as it is distribution (e.g., matching the teacher to the job). Nationally there is a sufficient supply of teachers. Shortages appear in terms of specific subject areas like Science and Math, and in terms of geographic areas such as northern Manitoba. Short term strategies to deal with the problem probably rest at the local level while long term solutions are the responsibility of government and teacher training institutions working together.[1]

The issue of teacher shortages is not limited to Canada but is global in nature. Other countries that have similar concerns are Australia [2], Great Britain and the United States [3]. The supply and demand for teachers has an important influence on teacher quality.

Is Canada facing a teacher shortage or a teacher surplus? Is the situation the same in all regions of Canada? What factors influence teacher supply? Where does Canada recruit its teachers? What strategies could be employed to enhance quality teaching by improving the pool of skilled teachers?

The question as to whether Canada has enough teachers at all levels of its education and training sector to meet its needs over the next five, much less 50, years, is still to be answered.[4]

Teacher Shortage or Distribution

There is no definitive answer as to whether there is a teacher shortage or surplus in Canada. The answer may be "it depends". A personnel director trying to fill hard-to-staff positions may possess a completely different perspective than a teacher who has recently been terminated because of declining enrollments and budget restraints.

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[1] Hickcox, E. (2001, February). Teacher Supply and Demand: Forecasting the Weather is Easier. *Manitoba Council for Leadership in Education*, 12(2).

[2] CESCEO. *Demand and Supply of Primary and Secondary School Teachers in Australia*. (2001, July). A paper prepared by the CESCEO Teacher Supply and Demand Working Party and presented to the 12th annual MCEETYA Meeting, Melbourne, p.32-34.

[3] National Commission on Teaching and America's Future. (1996, September). *What matters most: Teaching for America's future(Summary report)*. New York: NCTAF.

[4] *The ABCs of Educator Demographics: Report of the findings of a situational analysis of Canada's education sector human resources*. (2002, January). CAETO: The Steering Group for the Situational Analysis of Canada's Education Sector Human Resources, p. iii.

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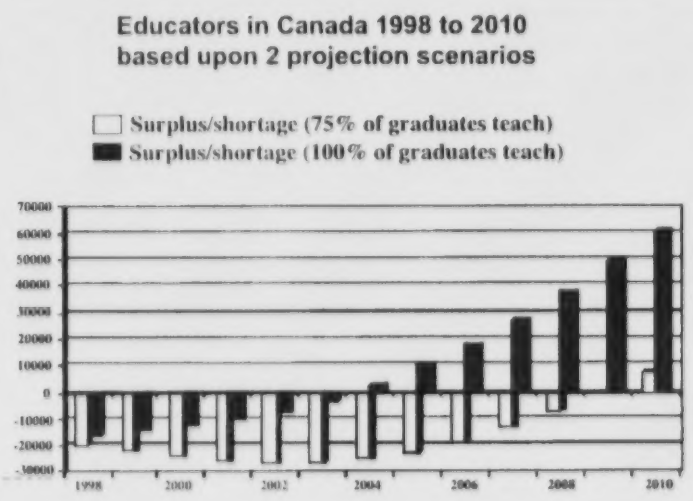
While many regional studies exist, the most comprehensive teacher supply and demand model for Canada-wide and provincial needs for 1998-2010 appears to be the one completed by the Centre for Education Statistics.[5] This model displays two scenarios for each region, one based upon 100% of teacher graduates entering teaching and one based on 75% entry; the 75% entry rate is considered the more realistic statistic. The composite picture for Canada is shown below in Figure 3.1 –Educators in Canada 1998-2010.

Figure 3.1- Educators in Canada 1998-2010



Using the 75% entry rate, Canada is facing a teacher shortage until 2008-9 when there will be a slight surplus, assuming the status quo in all the factors related to teacher supply and demand. Each province has different scenarios so while the national perspective is enlightening, the employment situation

[5] *The ABCs of Educator Demographics: Report of the findings of a situational analysis of Canada's education sector human resources.* (2002, January). CAETO: The Steering Group for the Situational Analysis of Canada's Education Sector Human Resources, p. 27-37, chart from p. 35.

in neighbouring provinces, for example Alberta and British Columbia or New Brunswick and Nova Scotia, can often be diametrically opposed. The commonality across Canada seems to be in the subject areas of greatest demand: mathematics, sciences, biology, chemistry, physics, and French Immersion, while some provinces also report shortages in guidance/ counselling and special education.

Availability of Canadian Data

The organizations that belong to Canadian Alliance of Education and Training Organizations (CAETO/ACOEF)[6] with the support of Human Resources Development Canada, have collaborated to determine what is known and not known about human resources in Canada's education and training sector. Their report[7] was a situational analysis with three main purposes:

(1) to provide a snapshot of Canada's education sector;
(2) to review current discourse on the issue of potential human resource shortages in the sector; and
(3) to consider directions for future research that would be useful for long-term human resource planning.

The main questions examined were:

Will there be enough teachers?
Will they be teaching the right subjects[8]*?*
Are they the right teachers,[9] *in terms of qualifications for their subject?*
What is happening to the role and work of teachers?[10]

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[6] Reference http://www.caeto.ca The project's steering group was composed of representatives from: Association of Canadian Community Colleges (ACCC), Canadian School Boards Association (CSBA), Canadian Teachers' Federation (CTF), Movement for Canadian Literacy (MCL), National Association of Career Colleges (NACC) and Statistics Canada Other members include: Canadian Coalition of Community Based Training (CCCBT/CCOCDE), Canadian Bureau for International Education (CBIE), Canadian Association for University Continuing Education (CAUCE), Canadian Association for Prior Learning Assessment (CAPLA). and Association of Universities and Colleges of Canada (AUCC)

[7] *The ABCs of Educator Demographics: Report of the findings of a situational analysis of Canada's education sector human resources.* (2002, January). CAETO: The Steering Group for the Situational Analysis of Canada's Education Sector Human Resources, p. iii.

[8] "right subjects" means those subjects where employers are having difficulty filling positions.

[9] "right teachers" includes three criteria: certification, subject preparation, and diversity

[10] *The ABCs of Educator Demographics* (2002, January), p. 5.

The report raises cautions about the Canadian data available[11] as it concludes *that there is an urgent need to fill a number of statistical and informational gaps in order to equip education and training providers and authorities with the data they will need to inform their strategic policy and human resource planning.*[12] The report's steering committee represents agencies with the most access to Canada-wide K-12 public education data: Statistics Canada, Human Resources Development Canada, Canadian Teachers' Federation and Canadian School Boards Association. The gaps and inconsistencies in Canadian data noted are also evident when attempting to make international comparisons. In OECD documents, for example, Canadian data appear fragmented or incomplete compared to other countries.

Therefore in this *Teacher Quality* report, where possible, recent data that is applicable to all of Canada will be referenced. However, in cases, where national data is not available, regional data will be used to illustrate a concept. Also where applicable, findings from the United States will be cited. While it is important to recognize and preserve the uniqueness of our Canadian identity, the American public education system has many parallels to our education systems and we can learn from their experiences.

Sources of Teachers in Canada

Full-time teachers are traditionally hired from the following main groups: recent teacher education program graduates; TOCs or Teachers-on-Call; part-time teachers; returning teachers; people on Letters of Permission, and immigrants. The first three groups provide the majority of certified teachers for filling vacancies.

While statistically it appears that the number of seats per year in teacher preparation institutions in Canada could satisfy the demand for new educators in Canada[13], this source does not in reality meet the demand. For each

[11] "Given the age of and contradictions in the human resource information available to researchers, the key element of the findings of the situational analysis points to the need for a more accurate modelling process that would use fresh and up-to-date data. Several factors lead to this conclusion. One is the availability, by time, of data collection and analysis. Some available data is now over five years old and is not useful for tracking the recent demographic or labour force changes on which good decision making must be based. Another key factor that results in differing figures is that researchers and analysts use the same definitions of different variables. In addition, there is generally no differentiation between public and private institutions when the numbers of educators and teachers are reported in the Census or in many other available databases. This makes distinguishing among the subsectors difficult for analysis." *The ABCs of Educator Demographics: Report of the findings of a situational analysis of Canada's education sector human resources*. (2002, January). CAETO: The Steering Group for the Situational Analysis of Canada's Education Sector Human Resources, p. iii.

[12] Ibid., p. iii.

[13] Tremblay, A. (1997). Are we headed towards a teacher surplus or teacher shortage? *Education Quarterly Review*, 4 (1), 53-85.

cohort of teacher training candidates, there are some that fail to complete their certification. Of those who graduate, according to the Centre for Education Statistics' model [14] and the Canadian Teachers" Federation[15], approximately 75% are employed as teachers. Attrition in the first years of entering the teaching profession accounts for even greater decline, as the CTF estimates 25 to 30 % of beginning teachers are not in the work force five years after certification.[16] In addition 15% of teachers surveyed in 1997 were either trying to find teaching employment elsewhere or leaving the profession altogether.

Supply and demand scenarios must consider not only the number of certified teachers available for employment in Canada but also the match of teacher candidates to the subject areas, grade levels, language of instruction and geographical location of the teaching vacancies.

One of the first signs of an impending imbalance between teacher supply and demand is the size and composition of the TOC force in a region. Many regions have experienced difficulty in recent years maintaining a TOC force to meet the needs of their school district.[17] [18] Part-time teachers are another component of the teacher pool. While the percent of teachers in Canada who work part-time is known, it is not known how many choose part-time employment versus those who are forced to accept part-time employment as a factor of the local employment situation. Teachers returning to the teaching profession form only a small percentage of the work force.

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[14] Ginette, G. & Thony, I. (2001, May). *The supply and demand of elementary-secondary educators in Canada*. Centre for Education Statistics, Statistics Canada. Paper presented at the 2001 PCERA Symposium; Teacher Education/Educator Training: Current Trends and Future Directions, Laval University, Quebec City, p. 35.

[15] Canadian Teachers' Federation – Background information available at http://www/ctf-fce.ca/E/WHAT/OTHER/tchr-sd.htm

[16] In the U.S., numbers range from 30% to 50% of graduates are not teaching within five years. More damning among the teachers who leave the classroom in the first three years are about twice as likely to have scored in the top 25% on the Scholastic Assessment Test or American College Testing program than those who were still teaching. Who Should Teach.(1999). *Education Week*.

[17] "Specifically, shortages were found province-wide at both elementary and secondary levels, particularly in specialized areas such as French-as-a-second-language (FSL), Mathematics, Physics, Chemistry, and Business and Technology Education. The Teachers-On-Call pool has become the route to permanent appointment, particularly when provincial policy decisions impacted local teacher supply and demand. Some teachers were found to be teaching out-of-field, necessitating their re-alignment with the demands of the curriculum to meet the learning needs of students." Ginette, G. & Thony, I. (2001, May). *The supply and demand of elementary-secondary educators in Canada*. Centre for Education Statistics, Statistics Canada. Paper presented at the 2001 PCERA Symposium; Teacher Education/Educator Training: Current Trends and Future Directions, Laval University, Quebec City, p. 1.

[18] Dibbon, David C. (2001, May). *Teacher Supply and Demand: An analysis of current developments in Newfoundland and Labrador*. Paper presented at the 2001 PCERA Symposium; Teacher Education/Educator Training: Current Trends and Future Directions, Laval University, Quebec City, p. 17.

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Non-certified teachers are a very small percentage of the total workforce, especially compared to other countries such as the United States. However, in recent years the numbers of teachers on Letters of Permission have increased significantly.[19]

Immigrants form only a small proportion of the active members of the teaching profession although the federal government declares that attracting highly skilled immigrants is a high priority. The implementation of the new Immigration and Refugee Protection Act and regulations in 2002 that focus on *an integrated and transparent approach to the recognition of foreign credentials*[20] may increase the numbers of immigrant teachers available for certification in Canada.

However even Canadian trained and provincially certified teachers moving between provinces currently can encounter difficulties trying to gain certification and employment. An Agreement-In-Principle - Labour Mobility Chapter of the Agreement on Internal Trade/Teaching Profession was approved in 1999 by the Council of Ministers of Education, Canada to try to address this concern.[21]

Factors that Impact Canada's Teacher Supply and Demand

Teacher supply and demand in Canada is influenced by many factors, some of which are national in nature and others which are regional. These factors have been documented by many reports, some of which contradict each other. However, most recent reports state that there are supply issues in most regions in Canada, with some regions facing acute needs in some subject areas or locations. At the same time, many people trained as teachers are not able to obtain the level of employment (full or part-time) they wish in the teaching force in their local community.

[19] Susan Langley, Secretary-Treasurer of the Ontario Teachers' Federation says that in 2000-2001, 1,314 teachers in Ontario were on Letters of Permission, an increase of 1,545% from 1997. (2001,November 28). Notes from *Canadian Summit on Performance Accountability and Assessment in Education*.

[20] *Knowledge Matters: Skills and Learning for Canadians*. (2002). Hull: Human Resources Development Canada, p. 12.

[21] Council of Ministers of Education (CMEC). (1999). Agreement-In-Principle - Labour Mobility Chapter of the Agreement on Internal Trade/Teaching Profession.. Retrieved from http://www.cmec.ca/else/agreement.en.stm

Teacher Participation in the Work Force

Retirements

One major factor causing a demand for teachers is the aging or "graying" of the teacher work force across Canada. For example, in British Columbia in 1999, more than 12,000 (31%) of all educators were 50 years or older which means that they are likely to retire between 2003 and 2007[22]. The education sector has the lowest median age of retirement of any industry in Canada.[23] The median age for teachers to retire is between 57 to 59 years of age[24 & 25], and teachers are retiring at a younger age than they did 15 years ago[26].

As teachers can choose when they retire, forecasting of supply and demand statistics is imprecise. The implementation or rescinding of early-retirement plans (ERIPs) or incentives, the changing of a working condition (e.g., class size or length of working day), or the state of the general economy are all factors that seem to influence the number of retirements in a particular year. As many jurisdictions do not require official notice of retirement until late in the school year, confirmed supply needs for September may not be known until early June.

Teacher Choice

The willingness of teachers to relocate affects their chances of employment as a full-time teacher in their chosen area of expertise.[27] There are many factors that may influence place-boundness including family obligations, perceived quality of life, the difficulties associated with gaining certification in another province or the loss of seniority when changing districts. Many regions in Canada that are perceived as hard-to-staff offer financial incentives to teachers.

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[22] British Columbia Teachers' Federation. (2001, Spring). The Teacher Shortage, *Teacher Newsmagazine*, 13(6).

[23] Retrieved from http://www.ctf-fce.ca/E/WHAT/OTHER/report.htm, p. 7.

[24] British Columbia Teachers' Federation. (2001, Spring). The Teacher Shortage, *Teacher Newsmagazine*, 13(6).

[25] Grimmett, P. & Echols, F. (2001, May). *Teacher and administrator shortages in changing times: Avoiding the dilemma of saving the train from hijackers to find there's no train left!* Paper presented at the 2001 PCERA Symposium; Teacher Education/Educator Training: Current Trends and Future Directions, Laval University, Quebec City, p. 4 & 7.

[26] Manitoba Teachers' Society. (2002, January). *The Teaching Force in Manitoba: Recruitment and Retention*, p. 15.

[27] An indication of place-boundness can be suggested through the small sample of unemployed respondents in this survey. 25% responded they would be willing to move within the province, 35.5% would move within the region while 40% were place-bound or unwilling to move. British Columbia College of Teachers. (2001, May). *Report of the 2000 Survey of Recent Graduates of British Columbia Teacher Education Programs*. Vancouver: BC College of Teachers, p.8.

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The availability of part-time versus full-time work or temporary versus continuing or tenured work also influences supply and demand for certified teachers. This perception of availability of employment also influences the future supply of quality teachers, as teacher education program potential applicants make career decisions based on their perceptions. People will train for occupations which they believe will meet their envisioned job satisfaction, status, financial consideration, geographical location, security of employment, and other lifestyle considerations.

Canadian teachers currently have greater choice as to where they will work outside the public school system. There is increased competition for qualified teachers to work in private schools in Canada, in public education in other countries experiencing teacher shortages, as trainers in private industry, and to work overseas as ESL teachers.

More research on the 25% to 30% attrition rate is required, as it is not clear whether the causes of attrition are primarily personal reasons, economic conditions or other unknown factors.[28] One trend to note is the choice being made by potential and current male teachers. In the Canadian public school system, a growing majority of teaching positions are held by women, especially in the under age 30 portion of the teaching force.[29]

Student Demographics and Enrolment Patterns

There will be an estimated 9% drop from 2000 to 2010 in the number of people in Canada aged five to 14 and an estimated 6% rise from 2000 to 2010 in the number of people aged 15 to 19.[30] This will cause shifts in the public school teaching force. Less elementary and more senior secondary teaching assignments will be needed assuming the same retention of students as currently exists. However, in any year the actual composition of a specific district's student population may not precisely mirror the national or even provincial forecasts.

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[28] *The ABCs of Educator Demographics: Report of the findings of a situational analysis of Canada's education sector human resources.* (2002, January). CAETO: The Steering Group for the Situational Analysis of Canada's Education Sector Human Resources, p. v, 25, 27, 30 and 57.

[29] The 1996 census notes 81.2% of elementary and kindergarten teachers, 50.4% of secondary school teachers and 64.3% of school and guidance counsellors were female compared to 46.0% of all occupations. *The ABCs of Educator Demographics: Report of the findings of a situational analysis of Canada's education sector human resources.* (2002, January). CAETO: The Steering Group for the Situational Analysis of Canada's Education Sector Human Resources, p. 12.

[30] Statistics Canada. (2002, April 5). New EPI figures. Retrieved from http://www.statcan.ca:80/english/sdds/3144.htm

Policy and Budget Factors

Provincial and district policies can influence teacher supply and demand, as does budget. Policy decisions are ideally made to maximize student learning but in the current economic climate, funding allocationa, in fact, may be viewed by some currently to be overriding policy decisions. Due to budget restraints there is an increase in the closing and consolidation of schools in both rural and urban areas. Whenever there is consolidation, while the number of students to be served usually remains constant, the composition of the teaching force to serve those students changes slightly. A change in one school in a district has ripple effects upon the employment and assignment of teachers at other schools in the district.

Other examples of policy changes that can directly affect teacher supply or demand are changes in the curriculum or its delivery. If a subject area is no longer deemed mandatory, many students may not select that subject area in the future. Those teacher specialists will need to be redeployed in other subject areas, and this may result in a need for retraining and/or teaching out-of-field. Teachers with higher seniority will affect the employment of teachers in other specialty areas with lower seniority.

Disruptions may also occur if a subject area is added to the curriculum that has not been a recognized area of teacher preparation specialization, e.g. the early years of implementation of computer-related curriculum. In order to implement a new curriculum requirement there needs to be an elimination or reduction of the requirement for specialist teachers in another discipline(s).

Special initiatives or changes in program delivery can also either increase or decrease teacher demand. Changes in class size, changes in ratios and guidelines for non-enrolling teachers (e.g., counsellors, librarians, special class teachers), and mainstreaming are all examples of policy decisions that affect the composition of the teaching force. The effects of budget reductions at either a provincial or district level directly influences the supply and demand requirements from year to year at the local level.[31]

[31] British Columbia Teachers' Federation. (2000, November). *Teacher Supply and Demand in British Columbia Enhancing the Quality of Education: Attracting, Recruiting and Retaining the Best Teachers.* A brief to the Government of British Columbia from the British Columbia Teachers' Federation, p. 1.

Other Factors that Impact Supply and Demand at the Provincial and District Level

In addition to the above, still other factors may influence teachers' decisions to seek employment in a specific province or territory. The language of instruction of a teaching assignment (French, English or a First Nations language) can influence the employability prospect for a teacher and supply issues for the school district. Some teachers may choose employment based upon religious affiliation depending upon the choices available in the provincial public school system. Differences in teacher contracts between regions may also affect supply and demand issues. Programs offered by teacher training institutions and their geographical placement within a province could affect the teacher supply and demand balance both within a province and in neighbouring provinces.[32]

Strategies to Balance Teacher Supply and Demand

In considering strategies to balance teacher supply and demand, the Canadian Teachers' Federation calls for policy initiatives to develop long-term positive gains for public education, enhance the teaching profession and increase teacher morale. Included in their suggestions are expanded teacher training spaces, support programs for beginning teachers, and improved conditions for teachers and students. They call for supportive programs and competitive compensation for teachers as well as greater opportunity for in-service. The CTF recommends the use of substitute and part-time teachers to fill full-time positions, but warns against diluting teacher certification or allowing non-certified teachers to teach, increasing class sizes, eliminating school programs, and substituting teacher aides for teachers. They advise that these recommendations require a greater investment in public education.[33]

[32] "B.C. has traditionally relied on teacher-education programs outside the province to provide the full complement of teachers needed, but in recent years fewer teachers have been migrating to B.C.," British Columbia Teachers' Federation. (2001, Spring). The Teacher Shortage, *Teacher Newsmagazine*, 13(6).

[33] Canadian Teachers' Federation. *Background Information* Retrieved from http://www/ctf-fce.ca/F/WHAT/OTHER/tchr-sup-back.htm

The British Columbia Teacher Supply and Demand Consortium, formed in January 2000, is considering the following short-term strategies:

. . . the development of a web site; a feasibility study of financial incentives for attracting, recruiting, and retaining teachers; recruiting for shortages in specific and specialized areas; and a report on harmonizing data to provide for better understanding of teacher supply and demand in B.C. Other strategies of interest to the various members of the consortium and definitely of interest to BCTF are supporting programs that mentor new teachers, finding alternative pathways to certification, and recruiting under represented groups.[34]

Press (1996) [35] lists strategies from respondents to prevent regional and program imbalances. Their responses include suggestions already listed above as well as adopting an interprovincial pension credit agreement; providing better data on teaching opportunities for young people; and creating a national discussion of teacher mobility issues.

As the *Future of Learning Report* (2002) proposes:

There are predictions that the system is facing a significant shortage of qualified personnel to meet growing enrolments and to replace existing staff as they retire or move out of the system. Detailed reports and recommendations concerning this barrier to improvement are a matter of record. It should be noted, however, that most projections assume that the current arrangements and practices regarding recruitment, training, and deployment of personnel will remain unchanged. There may be merit, therefore, to considering alternatives to the status quo.[36]

To ensure continuous quality improvement of the Canadian teaching force, now may be the time to consider some alternatives that will be detailed in later chapters.

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[34] *British Columbia Teachers' Federation. (2001, Spring). The Teacher Shortage*, Teacher Newsmagazine, *13(6)*.

[35] Press, Harold. (1996). *Teacher Demand in Canada: A Report on the Teacher Labour Market*. Retrieved from http://www.stemnet.nf.ca/~hpress/teacher_demand/chap4.html

[36] Province of British Columbia. (2002, March). *A Future for Learners: A Vision for Renewal of Education in British Columbia*. Select Standing Committee on Education Report, The Legislative Assembly of British Columbia, Victoria.

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IV Initial Preparation of Teachers

Research confirms that teacher knowledge of subject matter, student learning and development, and teaching methods are all important elements of teacher effectiveness. Reviews of more than 200 studies contradict the long-standing myths that "anyone can teach" and that "teachers are born and not made". This research also makes it clear that teachers need to know much more than the subject matter they teach. Teacher education, it turns out, matters a great deal.

Teachers who are fully prepared and certified in both their discipline and in education are more highly rated and are more successful with students than are teachers without preparation, and those with greater training in learning, child development, teaching methods, and curriculum are found to be more effective than those with less.

Not only does teacher education matter, but more teacher education appears to be better than less - particularly when it includes carefully planned clinical experiences that are interwoven with coursework on learning and teaching. Recent studies of redesigned teacher education programs -those that offer a five-year program including an extended internship - find their graduates are more successful and more likely to enter and remain in teaching than graduates of traditional undergraduate programs.[1]

In any examination of teacher quality, it seems obvious that the pre-service training of teachers will be an important factor. The quality of pre-service programs is an area receiving increased attention by researchers and policy makers. Mark Fetler (1997) reviewed the literature and conducted empirical research in California on the correlation between initial teacher education and factors such as early school leavers and teacher resignations. He referred to findings that teachers with regular certification receive higher evaluation ratings and their students achieve more than teachers who are not fully qualified do. Less qualified teachers are more likely to have lower expectations for low-income students and have more difficulty overcoming barriers to student learning. Moreover, from his own research Fetler found

[1] *National Commission on Teaching and America's Future. (1997).* Doing what matters most: Investing in quality teaching. *New York: NCTAF, p. 10.*

that schools had a lower dropout rate regardless of the school's size, location or poverty level, if the school employed more teachers who completed both a teacher education program and a bachelor's degree in a subject area.[2] The length and content of initial teacher preparation programs can make a significant difference in teacher quality and student achievement.

Pre-service/ Initial Teacher Training in Canada

Teacher training programs in Canada generally consist of four or five years of combined teacher education and university training. Epp and Epp state that there are three university routes to teaching: (1) *concurrent, direct entry BEd programs accept students directly after high school, (2) concurrent, delayed entry BEd programs accept students after they have successfully completed a stipulated number of arts and science classes, and (3) consecutive BEd programs accept students only after they have successfully completed an undergraduate degree in one or more teachable specializations.*[3]

There is no uniform route to certification. The length of the university program varies from province to province as well as by the type of credentialling option chosen.[4] Teacher education in Canada is mandated at the provincial level and is delivered by over 89 education-degree-granting institutions[5] causing a multiplicity of options in teacher training programs as the structure and content of programs can differ from institution to institution or even within an institution. Due to the diversity of entrance requirements for teacher training options, the high school grade point average and required high school subjects for prospective teachers can vary widely or may not even be part of the program admission requirements.

[2] Fetler, M. (1997, January). Staffing up and dropping out: Unintended consequences of high demand for teachers. *Education Policy Analysis Archives* [On-line serial], 5(16), p. 4-5.

[3] Epp, W. and Epp, J. R. (2000). *EQAO Research Series Number 5*. Toronto, Ontario: Queen's Printer, p. 10-11.

[4] A chart (last updated August 1999) detailing by province the minimum requirements to enter the teaching profession. Retrieved from the Canadian Teachers' Federation web site http://www.ctf-fce.ca/E/TIC/becoming.htm

[5] Epp, W. and Epp, J. R. (2000). *EQAO Research Series Number 5*. Toronto, Ontario: Queen's Printer, p. 2.

Determination of Teacher Preparation Program Curriculum and Delivery

Certification in Canada is done by the provincial Ministries of Education, except for British Columbia and Ontario, where the College of Teachers has this authority. In the absence of national standards and with teacher certification requirements being linked to university degrees, individual universities and colleges have had *de facto* control over the requirements for teacher certification. This has recently been tested in the British Columbia Supreme Court (May 2001) and the Appeal Court of British Columbia (April 2002) in a case between the British Columbia College of Teachers and the University of British Columbia, with two other universities participating with intervenor status. The Honourable Madam Justice Southin writes:

The fundamental issue between the parties is who has the right to determine the curriculum to those who seek the right to teach in the British Columbia school system – is it the University which offers a Bachelor's Degree in Education which is generally understood to give entrée to the teaching profession in this Province, or the College, which under its statutory mandate has the power to grant teaching certificates?[6]

The Court found that the issues are not justiciable and that if the College and Universities cannot *end the skirmishing between them* the Legislature will have to make statuary amendments.[7] According to the judgement the University argued that the College determines the "what" or content of eacher preparation programs and a university should determine the "how" or program delivery. The College argued that the content and its delivery could not be separated. This issue of who has the right to determine the curriculum and how it will be delivered remains to be resolved. How it is resolved will influence the future roles and responsibilities of all involved in teacher education and certification in Canada.

Evaluation of Teacher Preparation Program Curriculum and Delivery

In Canada each province or territory is responsible for teacher education programs. There is no federal rating or comparative evaluation system for teacher preparation institutions as there now is in the United States. There

[6] Southin, Madam Justice. (2002, May 15). The Court of Appeal of British Columbia, University of British Columbia v. British Columbia College of Teachers. Docket: CA028628 2002 BCCA 310.

[7] Ibid., (2002, May 15).

every state now must report annually to the federal government on the quality of the teacher preparation programs in relation to the following criteria:

- *standards for teachers and their alignment with standards for students*
- *requirements for an initial teaching certificate or license through either an alternate or regular route*
- *pass rates on each assessment used by states in certifying or licensing teachers*
- *state standards for evaluating the performance of teacher preparation programs*
- *teachers in the classroom on waivers, that is, teaching without an initial regular certificate or license from any state*
- *state efforts in the past year to improve the quality of teaching.*[8]

However a review of the data reported in Meeting the Highly Qualified Teachers Challenge [9](June 2002) and an interpretation of that data by the Education Trust point out glaring inconsistencies and omissions in the data, suggesting the process has yet to be perfected.[10]

Typical Teacher Education Program Components

All Canadian teacher training programs currently have three components: content courses, pedagogy courses and practicum or clinical experience requirements. The content area(s) relate to the subject areas that the prospective teacher wishes to teach. Provinces stipulate which areas are required as content areas at the different grade levels. Most often elementary teachers have been trained in the past more as generalists with greater specialization occurring as the grade level to be taught increases. Prospective teachers take course work in their "teachable" subject(s).

Pedagogical Component

As was cited earlier in this chapter, pedagogical training seems to make teachers more successful with students. However, as with many areas of teacher preparation, there is no research that directly assesses what teachers learn in their pedagogical preparation in relation to student learning or teacher behaviour. This is due to the problems of ambiguity over pedagogical course

[8] U. S. Department of Education (2001). *Title II Technical Reports - State Reports*.

[9] U.S. Department of Education, Office of Postsecondary Education, Office of Policy Planning and Innovation (2002, June). *Meeting the Highly Qualified Teacher Challenge: The Secretary's Annual Report on Teacher Quality*. Washington, DC.

[10] Huang, S., Yi, Y. and Haycock, K. (2002, June), *Interpret With Caution:The First State Title II Reports on the Quality of Teacher Preparation*. The Education Trust.

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content and sequencing even when courses were similarly labelled. For example, an instructional methods course could be generic or subject-specific. However, the research comparing certified to uncertified teachers and studies on the benefits of education course work support a positive effect of pedagogy courses, even if at this time the research has remained at a high level of aggregation providing little information about grade levels or subject areas.[11]

Pedagogy courses, courses specific to the teaching process itself, usually include "methods" courses as well as child and adolescent psychology, learning theories, educational measurement and testing, foundation courses such as history and sociology of education, responding to diverse student needs, creating assessments, and managing classrooms.[12] The British Columbia College of Teacher proposes an acceptable teacher education program must include studies in: (i) human development and learning; (ii) education foundations (history, philosophy, sociology); (iii) curriculum and instruction; (iv) diagnosing and providing for the educational needs of individual students; and (v) evaluation and testing.

Many educators believe that reading skills are the cornerstone of further learning. Therefore they advocate the mandatory inclusion of a core curriculum for reading instruction in teacher preparation programs, especially in elementary education, and urge that this curriculum form the basis of in-service for current teachers who may not have been exposed to the research-based knowledge now available.[13] Others believe that teachers at all levels should have a basic understanding of literacy and numeracy skills.

Clinical Practice

Clinical practice, practice teaching, or internships all describe the practicuum process, where the prospective teacher interacts in the classroom in the role of a teacher under the supervision of an experienced teacher or faculty member. Clinical practice requirements vary within Canada. In British Columbia, Nova Scotia and Saskatchewan the required practicum is 12 weeks, while in Ontario it is eight weeks or 40 days. The trend is for universities to provide more than the minimum amount required for licensing.

Compared to England, Canada has limited clinical practice. England, as part of its large-scale reform, has raised the minimum clinical experience requirements to 90 or 160 days depending upon the teacher education pro-

[11] Wilson, S., Floden, R., & Ferrini-Mundy, J. (2001, February). *Teacher Preparation Research: Current Knowledge, Gaps, and Recommendations.* A research report prepared for the U.S. Department of Education by the Center for the Study of Teaching and Policy, p. 12.

[12] Ibid., p. 12.

[13] American Federation of Teachers. (1999, June). *Teaching Reading Is Rocket Science: What Expert Teachers Should Know and Be Able to Do.* Washington, DC: AFT, p. 8.

gram chosen. Japan appears to have limited pre-service clinical experience but the novice teacher is assigned to a master teacher who is given a leave of absence to mentor the novice teacher. The novice also completes an additional 30 days of teacher education in the first year of teaching before certification is granted. [14]

Features of Strong Teacher Education Programs

Darling-Hammond (2000b) identifies six common features of strong teacher education programs:

- *a common, clear vision of good teaching that is apparent in all coursework and clinical experiences;*
- *well-defined standards of practice and performance that are used to guide and evaluate coursework and clinical work;*
- *a curriculum grounded in substantial knowledge of child and adolescent development, learning theory, cognition, motivation, and subject matter pedagogy, taught in the context of practice;*
- *extended clinical experiences (at least 30 weeks) which are carefully chosen to support the ideas and practices presented in simultaneous, closely interwoven coursework;*
- *strong relationships, common knowledge, and shared beliefs among school- and university-based faculty; and,*
- *extensive use of case study methods, teacher research, performance assessments, and portfolio evaluation to ensure that learning is applied to the real problems of practice.*[15]

The American Council on Education (ACE) President's Task Force on Teacher Education identifies these characteristics of successful teacher preparation programs:

- *collaboration between arts and sciences faculty and education faculty;*
- *the central administration of universities working together with school leaders;*
- *an effective process of admission to teacher candidacy;*
- *establishment of an induction support process;*

[14] Epp, W. and Epp, J. R. (2000). *EQAO Research Series Number 5*. Toronto, Ontario: Queen's Printer, p 5 & 8.

[15] Darling-Hammond, L. (Ed.). (2000) *Studies of excellence in teacher education: Preparation in undergraduate years*. Washington, DC: American Association of Colleges of Teacher Education, p. x.

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- *articulation of the program's elements; and,*
- *an evaluation process for program quality and outcomes.*[16]

The University of Toronto has redesigned its teacher preparation program in order to be more congruent with these tenets as well as focusing on the moral purpose of teaching Fullan (2001). Fullan considers the design features of teacher education programs to be critical, especially the integration of university work with classroom experience, the working with cohorts of 30 to 60 students, the teams of university and school-based leaders and the clusters of partner schools. He characterizes school-university partnerships as jointly committed to teacher education as they are committed to school improvement.[17]

Certifications

In some jurisdictions in Canada there are different types of certification that can be granted to successful candidates of teacher preparation programs depending upon the grade level to be taught and the academic preparation obtained.[18] In most provinces except for Quebec and Ontario a teaching certificate allows a teacher to teach at any grade level from K or 1 - 12. Only in Ontario must a teacher be certified to teach specific divisions and subject areas. This Certificate of Qualification is limited by the content of courses taken at university.

The length of time for which the permanent certification is valid ranges along a continuum from "permanent when issued" (Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, British Columbia) to " permanent upon two years of successful teaching" (Newfoundland and Labrador, Prince Edward Island, Alberta and Northwest Territories) to "valid for five years" (Quebec). Ontario is in the middle of a process to establish recertification every five years. A certificate in the Yukon Territory is valid upon issue until the teacher is inactive as a teacher for 10 years. This is the only provincial certificate other than Quebec's and Ontario's with a stated expiry date.[19]

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[16] American Council on Education. (1999). *To Touch the Future: Transforming the Way Teachers are Taught: Facts and Figures.* Washington, DC: ACE.

[17] Fullan, M. (2001). *The new meaning of educational change (third edition).* Toronto, Ontario: Irwin Publishing, p. 246-247.

[18] Epp, Walter and Epp, Juanita Ross. EQAO Research Series Number 5, December 2000, Queen's Printer, Toronto, Ontario. -see Table 7 -- Provincial Certification Requirements Excluding Special Cases from East to West, p. 24.

[19] Ibid., p. 24.

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Teacher Testing

Many states in the United States as well as countries such as Australia, England, France, and New Zealand have implemented testing programs for new and established teachers. Recently the Ontario government has introduced legislation that mandates two types of testing for teachers. The Ontario Teacher Qualifying Test and a language proficiency test are among the initiatives in the Ontario Teacher Testing Program whose stated aim is to develop *a made-in-Ontario program that sets new standards and practices for teacher quality and teaching excellence.*[20] Ontario has implemented a language proficiency test in either French or English for any teachers trained outside the province in a language other than French or English.

All teachers new to the teaching profession and/or new to teaching in Ontario will now have to successfully complete the Ontario Teacher Qualifying Test before they can teach in Ontario. This test is designed to assess *candidates' knowledge of teaching skills and strategies, assessment strategies, learning theory, special education, classroom management, the use of educational technologies, and legislation relevant to teaching in Ontario.*[21] Due to many issues related to the implementation process, the results are not being used this year to grant or deny licencing for the first group of teachers who completed the test this spring (2002).

Alternate Certification

The purpose of alternate certification is to streamline the process, putting qualified candidates in a classroom in a shorter time span than traditional teacher training programs. Alternate or alternative certification has been implemented in many different formats. In the United States at this time about 6% of the current teaching force, or 175,000 teachers, hold alternate certificates.[22] Where the alternate certification programs differ from each other is in whether the candidates have to complete the same requirements for coursework and practice teaching as their traditionally trained colleagues. Some programs have the candidates complete the work in a shortened format pre-service, while others complete the coursework while they are already teaching in the classroom. Still other programs waive components of the coursework. In all programs the teacher must pass the same certification or licensure exams, if applicable, in their jurisdiction.

[20] Province of Ontario. Ontario *Teaching Testing program: An Overview*. Retrieved from http://www.edu.gov.on.ca/eng/teacher/testing/index.html

[21] http://www.edu.gov.on.ca/eng/document/nr/02.04/bg0423education.html

[22] U.S. Department of Education, Office of Postsecondary Education, Office of Policy Planning and Innovation (2002, June). *Meeting the Highly Qualified Teacher Challenge: The Secretary's Annual Report on Teacher Quality*. Washington, DC, p.31.

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Wilson et al. (2001) suggest the important features of *high quality alternative certification include: high entrance standards; extensive mentoring and supervision; extensive pedagogical training in instruction, management, curriculum, and working with diverse students; frequent and substantial evaluation; practice in lesson planning, and teaching prior to taking on full responsibility as a teacher; and high exit standards.*[23] These components parallel some of those major criteria of good "traditional" certification programs.

There are differences of opinion as to the value of alternate certification programs. Darling-Hammond believes that *while these abbreviated programs have altruistic intentions, they do not produce a stable, high-quality teaching force for schools with the greatest needs*. She produces a cost analysis that suggests with the lower retention rate of alternate certificate teachers after three years, they actually cost more per teacher to train than does a traditionally trained teacher or an extended five-year program teacher.[24] Studies have found that five-year program graduates not only stay in teaching longer, they are more satisfied with their preparation, are more highly rated by others, and are as effective with students as more experienced teachers.[25] Miller, McKenna and McKenna (1998) matched 41 alternatively trained teachers with 41 traditionally trained teachers in the same school and found no significant differences between student achievement in the two types of classrooms. More research is needed to determine if there are significant differences in student achievement attributable to whether the teacher was alternately certified or had completed a five-year program.

Compared to the United States, a smaller percentage of Canadian teachers in the public school system lack a teaching certificate. In most cases in letters-of-permission or letters-of agreement with a specified time limit have been created for those who wish to teach in areas where there is a limited or non-existent supply of certified teachers. For at least those in very specialized or emerging subject areas, there always has been and will be the need for fast-track or alternate credentialling programs.

One such emerging need that has been addressed by an alternate credentialling program in British Columbia is the First Nations Language and Culture. The British Columbia College of Teachers' Developmental

[23] Wilson, S., Floden, R., & Ferrini-Mundy, J. (2001, February). *Teacher Preparation Research: Current Knowledge, Gaps, and Recommendations.* A research report prepared for the U.S. Department of Education by the Center for the Study of Teaching and Policy, p. 30.

[24] Darling-Hammond, Linda. Solving the dilemmas of teacher supply and quality. New York: National Commission on Teaching and America's Future, 2000.

[25] Darling-Hammond, L. (2001, May). The Challenge of Staffing Our Schools. *Educational Leadership*, 58(8), p. 14 -15.

Standard Term Certificate which allows those who have an expertise or skill to work in stages towards a teaching degree, i.e., chefs, has been further adapted to the specific needs of prospective First Nations Language and Culture teachers.[26]

Induction and Career Development Programs

Research shows that induction programs where beginning teachers are systematically mentored during their first year(s) of teaching improve both teacher effectiveness and retention.[27] Without help in their isolated classrooms as many as 25% of teachers in Canada[28] and 30-50% in the United States leave the classroom in the first five years of their career.[29] [30]

Fullan and Hargreaves (2000) identify that mentoring incorporated with the following strategies can make a lasting difference. Mentoring programs should be designed as instruments of school reculturing explicitly connected to other reform components. Programs should meet the needs of all teachers new to a school or district. They predict that mentoring will evolve from being a paired activity to a school-wide activity that concentrates not only on classroom work with students but may also include the ability to have strong relationships with colleagues and parents. Shared inquiry into practice will be only one component of larger efforts to reculture our schools as *the goal is not to create high quality mentor programs as ends in themselves but rather to incorporate mentoring as part of transforming teaching into a true learning profession.*[31]

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[26] In response to a need in B.C, the First Nations Language Certificate was created to recognize elders and other fluent speakers of First Nations languages teaching in public schools. Full certification was the next logical step but many of the potential teachers do not live near a university. The college therefore adapted the "Developmental Standard Term Certificate" to the needs of prospective First Nations Language and Culture elementary teachers. The teaching students will attend SFU on a flexible full- and part-time basis to do three years of course study and then have four years in which to complete the program. If they have not finished after four years, the certificate can be renewed once, for a further four years. At the end of eight years, they must have completed their course work, in order to obtain their degree and full certification as a teacher in BC. Adapted from British Columbia School Trustees Association. (2002, January 31). Program meets all needs. *BCSTA Education Leader,* 15(1), p. 8.

[27] National Commission on Teaching and America's Future. (1996, September). *What matters most: Teaching for America's future*. New York: NCTAF, p. 21.

[28] Canadian Teachers' Federation – Background information available at http://www/ctf-fce.ca/E/WHAT/OTHER/tchr-sd.htm

[29] National Commission on Teaching and America's Future. (1996, September), p. 14.

[30] Hirsch, E, Koppich, J. & Knapp, M. (2001). *Revisiting what states are doing to improve the quality of teaching: An update on patterns and trends*. Center for the Study of Teaching and Policy, University of Washington, p. 34.

[31] Hargreaves, A. & Fullan, M. (2000, Winter). Mentoring in the new millennium. *Theory Into Practice*, 39(1), p. 55.

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California's *Beginning Teacher Support and Assessment Program (BTSA) has proved successful in retaining teachers, with an attrition rate of nine percent of beginning teachers in five years, versus a rate of 37 percent without BTSA or a similar induction program.*[32] This pilot serving only 17% of eligible teachers was expanded to include all new teachers in their first and second years. In 1999 the state also enacted a peer review program which can coordinate with BTSA.[33] Many other jurisdictions also support or legislate formal induction programs. Often lack of funding or lack of clear direction for a program undermines its full potential.

Cincinnati, Ohio has a well developed teacher preparation and professional development continuum. A five-year university program that includes the completion of a bachelor's degree in a subject area as well as a master's degree in education has been instituted. Teacher training candidates engage in ongoing clinical experience in professional practice schools for four of their five years of study. Starting in their second year, candidates conduct classroom observations, research studies and participate in tutoring at these sites. By their fifth year, they complete a full-year internship which consists of half-time teaching with coordinated seminars. As new teachers, they are assigned a mentor in Cincinnati's Career-in-Teaching program and receive intensive help from a consulting teacher who has been selected for his/her expertise and given release time to fulfil their role. At the end of the first year of teaching, the consulting teacher recommends the continuation or dismissal of the new teacher.

The Cincinnati program has resulted in lower attrition of beginning teachers, higher levels of competence and greater selectivity about who remains in the teaching profession. The progression available within the teaching profession in Cincinnati is from teacher candidate to intern to resident to professional teacher and eventually to lead teacher.[34] This is a program that seems to exemplify how *teacher preparation and professional development should be focused on a set of shared knowledge, skills, and commitments*[35] and implemented in such a manner as to nurture teacher learning throughout their career.

[32] Bullard, C. (1998). *Qualified Teachers for All California Students: Current Issues in Recruitment, Retention, Preparation and Professional Development.* Sacramento: California Research Bureau, CRB-98-012, p.21.
[33] Hirsch, E, Koppich, J. & Knapp, M. (2001), p. 35.
[34] ***What matters most**: Teaching for America's future*, p. 22.
[35] ***What matters most**: Teaching for America's future*, p. 19.

V Hiring and Assignment Practices

Once teachers are prepared, then we move into the hiring and assignment practices. The challenge of teaching is captured in this position available advertisement.

POSITION AVAILABLE

University graduates with academic major (master's degree preferred). Excellent communication & leadership skills required. Challenging opportunity to serve 150 children and/or adolescents daily on a tight schedule, developing up to five products each day to meet individual needs, while adhering to multiple product specifications. Adaptability helpful, since suppliers cannot always deliver goods on time, incumbent must arrange for own support services, and customers rarely know what they want. Ideal candidate will enjoy working in isolation from colleagues.

This diversified position allows employee to exercise typing, clerical, law enforcement, and social work skills between assignments and after hours. Typical workweek: 50 hours. Special nature of work may preclude amenities such as telephones or computers, but work has many intrinsic rewards. Starting salary $ 37.000 rising to $62,000 after only 11 years.[1]

The questions to be addressed in this chapter are: What are current personnel practices related to hiring and assignment of teachers? Where is the locus of control in the hiring and assignment processes? What are the operational and policy implications? What flexibility is necessary for managing quality? What innovations are occurring in other jurisdictions?

[1] Adapted from The Southeast Center for Teaching Quality. (2002, January). *Recruiting Teachers for Hard-to-Staff Schools: Solutions for the Southeast & the Nation*. The University of North Carolina – A Regional Office of the National Commission on Teaching and America's Future.

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Teacher Federations and Collective Agreements

Teachers in the Canadian public school system must be certified at the provincial level and they must also belong to a provincial teachers' association in order to be employed. Fourteen independent provincial teachers' associations representing 240,000 teachers are members of the Canadian Teachers' Federation.[2] In some provinces there are multiple teachers' associations depending upon the grade level taught, the religious affiliation or the language of instruction (Ontario, New Brunswick, Quebec)[3]. Some associations represent all educational personnel while others only represent public school teachers. Manitoba also welcomes private school teachers[4].

In seven of the provinces and the three territories, basic salary scales and fringe benefits are established through negotiations between the teachers' association and representatives of the government. In some cases, supplementary negotiations take place at the school board level concerning additional fringe benefits and conditions of work. In Alberta, Manitoba and Ontario, all negotiations take place at the local or regional level.[5]

Personnel practice in school districts is determined by the collective agreement currently in force between the specific province and/or district and its employees. Some of the generic articles usually determined by collective agreement are listed in Figure 5.1. The issues of tenure, seniority, hiring and assignment primarily influence current personnel practice.

Role of Tenure

Seniority and tenure are two concepts that are firmly established in the teaching profession in Canada. Tenure, or permanent appointment as a teacher, is often a right of employment with a district once the qualifying conditions have been met. Tenure is often characterised by the terms: continuing or permanent contract, providing job security for the length of the individual teacher's career. The teacher has the power to choose to terminate the employment by resigning. If the teacher does not resign, it is assumed that the employment contract continues until the mandatory retirement age.

[2] Canadian Teachers' Federation. *Speaking For Teachers* http://www.ctf-fce.ca/E/WHO/member.htm

[3] Canadian Teachers' Federation. *Member Organizations* http://www.ctf-fce.ca/E/WHO/member.htm

[4] Manitoba Teachers' Society. *Joining MTS: An Overview of Services*. Retrieved from http://www.mbteach.org/joinmain2.htm

[5] Canadian Teachers' Federation. *Teaching in Canada: Salaries and Fringe Benefits*. http://www.ctf-fce.ca/E/TIC/salaries.htm

Only under unusual circumstances can the employer suspend or terminate a tenured teacher's employment. Usually the conditions to be met and the process to be followed for dismissal are prescribed by contract. Suspensions or dismissals for discipline or non-compliance issues do occur but dismissal for teaching performance is very rare.[6] [7] [8] The issue of teacher evaluation and the consequences of poor performance will be addressed further in Chapter VII – Evaluation.

Tenure is guaranteed employment in a specific occupational role, i.e., teacher, within a district. Confusion may occur when a teacher misinterprets tenure. It should not be interpreted as the right to guaranteed employment within a certain school or with a specific teaching area or subject assignment at a certain grade or ability level.

Role of Seniority

In many contractual agreements where other factors are equal, seniority is often the deciding factor in determining which teacher is eligible for the position. Seniority is usually perceived as easier to quantitatively measure than teacher qualifications. Seniority is so important in Canadian teacher personnel practice that in most collective agreements the calculation of seniority is defined, a dispute mechanism related to seniority is articulated, and an annual seniority list is made available to each member of the bargaining unit.[9]

Initial Hiring

In most districts hiring is done at the district level. The district is responsible for the recruitment, selection and appointment of teachers. Different levels of participation from school-based staff may occur depending upon the district, the contractual agreement and the individual circumstances of the hiring situation.[10] In decentralized school districts, the school may have

[6] Tucker, P. (2001, February). Helping Struggling Teachers. *Educational Leadership*, 58(5), p. 52.

[7] Edgar, B. (1997). Tough Calls. *Adminfo*, BC Principals and Vice-Principals Association, p. 10-11.

[8] Province of Ontario. (1995). *For the Love of Learning: Report of the Royal Commission on Learning*, Section 12 (c).

[9] For examples of seniority clauses refer to Clauses 9.9.1 to 9.9.5 in the *Calgary School District #19 Collective Agreement*.

[10] Dunnigan, M., Gardner, A., Lessard, C., & Muhtadi, N. (2001, November). *Twelve Secondary Schools in Low-Income Settings*. Kelowna: Society for the Advancement of Excellence in Education. Descriptions of the staffing process at different schools in three provinces are described on the following pages: 8, 22, 50-1, 102, 124, 141, 168, 192, 219, 237, 247-8, 274, 298, and 324.

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Figure 5.1 - Sample Generic Articles in Teacher Collective Agreements

Sample Generic Articles in Teacher Collective Agreements

Definitions and Scope of Agreement

Management and Union Rights and Responsibilities

Personnel Classification and Compensation
Criteria for the Designation of Out-of-Scope Personnel
Recognition of Qualifications and Experience
Continuing Education and Summer School staff
Paraprofessionals (if included)
Salary:
- Placement on Grid
- Annual Allowances:
  - Recognition for Positions of Responsibility:
    - Department Head
    - Curriculum responsibilities
    - First aid designation
    - Principals and Vice-Principals (if included)
  - Location
  - Travel/ Mileage

Benefits:
- Sick, parenthood, compassionate, and other leaves
- Medical, dental, long-term disability, and life insurance
- Retirement gratuities and plans
- Sabbatical and study leaves
- Deferred salary plan

Personnel Processes
- Probationary Period, Seniority, Layoff and Recall
- Transfer and Placement Procedures

Disciplinary Actions – Appeals
Access to Personnel Files

Professional Development

control over more aspects of the final selection of candidates from a district-approved pool of teacher candidates. However in all aspects of the hiring process, the teacher initiates the process by an application to the district either for a specific position or for general employment.

Long-term Implications of Initial Hiring Process

The initial hiring process is a major determinant of the quality of the teaching force because seniority and tenure provisions make it difficult to reverse poor hiring decisions. This points to the importance of ensuring that the hiring for all categories of teacher employment (TOC, temporary or permanent contract positions) is based upon effective practice and viewed as a long-term investment. TOC or short-term vacancies frequently occur at non-typical times in the district's staffing cycle, with a common result being that part-time teachers are assigned out-of-field to augment their original contract.[11] While in the short-term this may seem an effective use of resources, it permits inappropriate new hires for short-term vacancies to gain seniority and greater access to tenure. Aggressive recruitment can enlarge the talent pool facilitating more appropriate hires. Effective gate-keeping functions reduce the problems of trying to adapt to or terminate inappropriate hires. Evaluating all applicants, even for short-term assignments, as though they were to be teaching 25 to 35 years in their initial or similar position, may encourage districts to reconsider the efficacy of abbreviated personnel practices on strengthening the quality of a district's teaching force.

The Posting and Assignment Process

In the posting process it is frequently the teacher who determines what school and assignment best meets the teacher's needs as opposed to the school determining which teacher best meets the students' needs. Collective agreements often have provisions for teachers to grieve postings and/ or assignments. As a result sometimes there is perceived game playing as schools try

[11] "Many urban and metropolitan districts have had to relax criteria relating to many of the speciality positions because they could not get enough qualified people with the requisite academic qualifications and additional preparation." Grimmett, P. & Echols, F. (2001, May). *Teacher and administrator shortages in changing times: Avoiding the dilemma of saving the train from hijackers to find there's no train left!* Paper presented at the 2001 PCERA Symposium; Teacher Education/Educator Training: Current Trends and Future Directions, Laval University, Quebec City, p. 8.

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to influence staffing decisions by the timing and construction of vacancy postings. These are not the most beneficial processes to allow the school administration to staff to meet the school's mission and goals.

The education system has few ways of recognizing and effectively deploying its best teachers. Novice teachers are expected to do the same work as veteran teachers. Teachers in most provinces are not recognised (1) for their preparation in specific subject areas, (2) for taking on the most challenging assignments or (3) in many cases for improving their skills and knowledge. Some teachers can raise their salary grid placement for additional years of university preparation, but this incentive has limits after six recognized years of university preparation. As teachers gain seniority, they often select the more affluent schools, the less challenging assignments, the easier schedules, or they move into administration. *Teachers are rarely rewarded for applying their expertise to the most challenging learning problems or major system needs.*[12] [13]. The system generally lacks differentiated pay structures between and within schools in order to distribute personnel where they are needed most to improve instruction.

Role of Qualifications

The research has shown how teacher quality can affect student learning even beyond the year in which a student is taught by a specific teacher (Sanders & Rivers, 1996). In spite of this research, due to many factors during the hiring and assignment process, the role of qualifications is often ambiguous. Some provinces delineate at which grade levels an individual is certified to teach.[14] In other Canadian jurisdictions, once initially credentialled, congruence between assignment and the teacher's qualifications in a subject or grade level is not required. In Ontario there appears to

[12] National Commission on Teaching and America's Future. (1996, September). *What matters most: Teaching for America's future*. New York: NCTAF, p. 24.

[13] Darling-Hammond, L. (1997). *The Right to Learn: A Blueprint for Creating Schools that Work*. San Francisco: Jossey-Bass, p. 269.

[14] Epp, W. and Epp, J. R. (2000). *EQAO Research Series Number 5*. Toronto, Ontario: Queen's Printer. See Table 7 – Provincial Certification Requirements, p. 24.

[15] "An Ontario Teacher's Certificate of Qualification lists the "divisions" and subjects in which the teacher is qualified to teach. The certificate and its contents are governed by Regulation 184/97 of the Ontario College of Teachers Act, entitled "Teacher Qualifications." At present, teachers in Ontario qualify to teach two consecutive divisions in the school system, as follows: (1) Primary/Junior (Kindergarten to Grade 6): these teachers are considered generalists, able to teach the entire mandated curriculum for these grades; (2) Junior/Intermediate (Grades 4 to 10): these teachers are also considered generalists, able to teach the entire mandated curriculum for these grades, plus one teachable subject from the approved curriculum for Grades 7 and 8 (i.e., English, mathematics, science); (3) Intermediate/Senior (Grades 7 to 12): these teachers qualify to teach two teachable subjects from the Intermediate and Senior teaching options list". Province of Ontario. (2001, June). *It's All About Improvement: The Report of the Task Force on Effective Schools*, p. 80.

[16] Province of Ontario. (2001, June). *It's All About Improvement: The Report of the Task Force on Effective Schools*, p. 80-81.

be more clarity, as teachers earn specialist certificates,[15] but even so there is a provision to assign teachers without specific qualifications for the assignment either through the emergency provision or by a Letter of Permission.[16]

Out-of-field Assignment Ingersoll (2002) observes that *highly qualified teachers may actually become highly unqualified if they are assigned to teach subjects for which they have little training or education.*[17] He notes that beginning teachers are more prone to be misassigned than veteran teachers are. However his data shows *those teaching out-of-field at either the elementary or secondary level are typically veterans with an average of 14 years of teaching experience, and about 45 percent of out-of-field teachers hold graduate degrees in disciplines other than the subjects assigned*[18]. Data on this widespread phenomenon show over one fifth of the American public secondary teachers are out-of-field for one or two classes out of a normal daily schedule of five classes.[19]

While Canada-wide data do not appear to be readily available (especially as it is often not possible to determine clearly if an individual is teaching out-of-field or to establish the relative position of two candidates along the continuum of out-of-field assignments)[20], out-of-field teaching does occur especially in Canadian secondary schools. A British Columbia College of Teachers Survey (2001) documents out-of-field teaching statistics by recent teacher education graduates who self–report their majors, minors or concentration areas of academic preparation as compared to the subjects they now teach regularly. The subjects most affected are Math (5.6% of respondents reported academic preparation in the subject area vs. 17.7% of respondents reported regularly teaching in the subject area), French (5.5% academic preparation vs. 11.0% teaching assignment), Library Science (0.1% vs. 2.8%), Chemistry (2.8% vs. 3.8%), and Physics (2.0% vs. 3.2%).[21] These teaching areas mirror shortages documented in other reports.[22 & 23]

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[17] Ingersoll, R.M. (2002, January). *Out-of-field teaching, educational inequality, and the organization of schools: An exploratory analysis.* Centre for the Study of Teaching and Policy, Seattle, WA: University of Washington, p. 5.

[18] Ibid., p. 20.

[19] Ibid., p. 20.

[20] Province of Ontario. (2001, June). *It's All About Improvement: The Report of the Task Force on Effective Schools*, p. 17.

[21] British Columbia College of Teachers. (2001, May). *Report of the 2000 Survey of Recent Graduates of British Columbia Teacher Education Programs.* Vancouver: BC College of Teachers, p. 7.

[22] Canadian Teachers' Federation. (2000, October). CTF Survey of Canadian School Boards on Supply/Demand Issues. *Economic Service Bulletin.*

[23] *British Columbia Ministry of Education Report for the British Columbia Teacher Supply and Demand Consortium.* Schools need teachers now as reported in *BCED News* (2001, March/April).

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Underlying Belief System With respect to teacher assignment practices, two conflicting belief systems appear to be operating. One is that any credentialled teacher should be able to vie for any teaching vacancy regardless of subject or grade level. The second is that only teachers with relevant recognized qualifications and experience should be considered for a specific vacancy. Legislation governing teacher credentialling and personnel practices related to hiring and assignment are all directly influenced by the underlying belief system of the government, institution or individual responsible for staffing.

Personnel directors often struggle to determine who is more qualified and should receive the assignment for a specific class:

- Teacher A, with a minor at university in a related area but without that recognized subject specialization;
- Teacher B, with that recognized specialization but who has not taught in that specific discipline for 20 years;
- Teacher C, with no formal training in the area but who appears to have successfully taught the class in a long-term TOC capacity last year; or,
- Teacher D, from out-of-district or out-of-province with the recognized specialization.

This determination of the best candidate is further complicated when the issues of seniority, experience, contractual obligations concerning the number and type of class assignments, evaluation reports and personal attributes are added into the decision-making process.

Role of Evaluation in Hiring and Assignment Process
In some cases previous evaluation of a teacher's performance cannot be probed extensively in the hiring and assignment process. Fear of potential grievances and litigation can inhibit assertive questioning of evaluations and reference checks with the result that hiring decisions are made in the absence of detailed data that would more accurately predict the teaching performance of applicants.

The bottom line is that the teacher best suited for a specific class is not always assigned to those students.

Innovations in Hiring and Assignment to Increase Teacher Quality

As understanding of the critical importance of teacher effects increases, attention is being directed to how staffing policies can support teacher quality. This is illustrated in the recent British Columbia Government report *A*

Vision for the Future which recommends that public interest would be best served if educational *institutions have the flexibility to: i) institute best practices, ii) organize and schedule learning opportunities, and iii) assign staff as required for the effective and efficient delivery of education services.*[24]

A number of innovations are being piloted in various jurisdictions to achieve this flexibility.

Organization and Scheduling of Learning Opportunities

This section examines two aspects of organization and scheduling: time and differentiated staffing.

Time

Program delivery is largely delineated by the contract: time cycle of assignment (i.e., number of minutes per week or per year); length of school day; duration of school week; and duration of the school year for students. Greater flexibility at the school level to determine optimum scheduling enables school administration to better utilize the talents of the teaching force to enhance student learning. Year round schooling and full-service schools are examples of this approach.

Differentiated Staffing

Differentiated staffing assignments may provide more efficiency in delivering some programs. Virtual schools, for example, employ teachers, counsellors and markers with differing roles to meet the needs of on-line program delivery. Barker and Wendel's study of virtual schooling point out similar and differing functions for teachers in a virtual school environment and raises a number of policy considerations that require further investigation.[25] Many teachers' associations however are opposed to any implementation of differentiated staffing.[26]

Assignment of Staff

[24] Province of British Columbia. (2002, March). *A Future for Learners: A Vision for Renewal of Education in British Columbia*. Select Standing Committee on Education Report, The Legislative Assembly of British Columbia, Victoria.

[25] Barker, K. & Wendel, T. (2001, February). *e-Learning: Studying Canada's Virtual Secondary Schools*, SAEE Research Series #8, Society for the Advancement of Excellence in Education, p. 95-6 and 111-112.

[26] Lawton, S., Bedard, G., MacLellan, D. & Li, X. (1999). *Teachers' Unions in Canada*. Calgary, Alberta: Detselig Enterprises, p. 79.

Probation and Induction
Many jurisdictions are requiring a longer probationary period for new hires, sometimes as long as two years, in order to accurately assess the teacher's performance. Hand in hand with this longer probationary period is a comprehensive teacher induction process which capitalizes on the expertise of master teachers who are released from teaching duties to actively mentor beginning teachers.

Dismissal Process A shorter time frame for the dismissal process increases the ability to dismiss an incompetent teacher if a remediation program is unsuccessful. A reduced time frame decreases the amount of harm to students' learning caused by incompetent teaching.

Seniority Some jurisdictions encourage staffing decisions made at the school level based upon identified school needs, rather than the seniority list. Litzke (2001) discusses how the concept of seniority as a basis of job security is being re-evaluated by progressive teacher unions. These TURN locals are moderating the tenet of seniority *by the qualifier that the job needs to be well done in order for the job to be secure. Worker equality is still central to the negotiation of base wages and terms of work, but TURN locals are beginning to reject the parallel premise of worker interchangeablity in relation to the performance of the work.*[27] Some examples of districts where these principles are in effect are Hammond, Pittsburgh, Toledo and Seattle.[28]

Qualification Certification Standardization of minimum qualifications for assignment of subject areas and supporting personnel practices seems to enhance teacher quality and therefore student achievement. Less out-of-field teaching was found in those districts that impose standards related to hiring and assigning teachers with a major or minor in the area to be taught and in those schools where teachers highly rate the leadership of the principal.[29]

Qualifications-Based Staffing at the School Level One example of qualifications-based staffing or hiring is practiced in Seattle School Dis-

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[27] Litzcke, K. (2001). *Teacher Unions as Players in Educational Reform: A Canadian Look at an American Trend*. Kelowna: Society for the Advancement of Excellence in Education, p. 18-19.

[28] Ibid., p. 19.

[29] Ingersoll, R.M. (2002, January). *Out-of-field teaching, educational inequality, and the organization of schools: An exploratory analysis.* Centre for the Study of Teaching and Policy, Seattle, WA: University of Washington, p. 23.

[30] Litzcke, p. 19.

trict. Vacancies are filled at the school level with the best candidate as determined by the school whether or not the district currently employs the person.[30] As Roger Erskine explains in Seattle *[we] set up a process where the people in the building made decisions about what their school plan would look like, based on the data we had generated around their students' learning needs.*[31] He continues to describe the process as "turning the vacancies" over to the school after providing a weighted student formula with 75% of the funding given to the school. Training was done with teachers and principals so that ownership and responsibility was created. School teams of five teachers, the principal, and in some cases *parents make decisions on how to spend their budget based on the needs of kids in their school.*[32] This results in innovative solutions such as attracting and retaining senior teachers in needier schools by reducing class size.

Reassignment or Reduction of Staff The ability to respond quickly to changing student demographics within a school year provides better utilization of staffing resources. Despite this, most contracts use the enrolment on September 30 to determine staffing needs and class sizes for the entire school year in spite of historical data showing changes in student enrolment. While most collective agreements have the capacity to easily add staff during the school year, reduction or reassignment of staff is much more difficult to implement under current contracts.

In extreme cases school staffs of chronically underachieving schools are being reconstituted. This involves posting all positions at that school and no currently assigned teacher is assumed to have tenure at the school level. Current teachers must apply and qualify for positions on an equal basis with others within the school district.

Hard-To-Staff Schools or Assignments The Education Commission of the States defines hard-to-staff schools as those *that have a particularly difficult time finding and retaining trained teachers who are effective with their student populations.* Incentives such as reduced class size, additional

[31] Raham, H. (Ed.). (2002). *Teacher Unions as Players in Educational Reform: Conference Proceedings: Education Roundtables.* Kelowna: Society for the Advancement of Excellence in Education, p. 11.

[32] Ibid., p. 11.

[33] The Southeast Center for Teaching Quality. (2002, January). *Recruiting Teachers for Hard-to-Staff Schools: Solutions for the Southeast & the Nation.* The University of North Carolina - A Regional Office of the National Commission on Teaching and America's Future.

[34] Riley, R. (1999). *New Expectations: Excerpts from the Seventh State of American Education Address.* Long Beach: The George Lucas Foundation, p. 2.

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preparation time and financial incentives[33] which will be discussed in the chapter on Compensation are being used to attract the more capable teachers to the more demanding assignments.

Professional Development

Enhancements to teacher learning by providing more effective professional development will be discussed in the next chapter. This could include deeming teaching to be a year-round profession in order to allow sufficient time for collaborative teacher planning and interaction.[34] Some jurisdictions are requiring teacher testing and renewal of qualifications on a cyclical basis throughout the teacher's career in order to keep the assignment they currently have. Within Canada, Quebec currently requires renewal of credentials every five years and Ontario is instituting a five year cycle. This is similar to Oregon where an initial teaching license is available for three years at which time the teacher must qualify for a continuing license. *The holder of a continuing license may renew the continuing license for five years by verification of successful teaching experience and continuing professional development in accordance with the rules of the commission.*[35]

The goal of hiring and assignment practices is to ensure a skilled teacher in every classroom, a teacher who most effectively meets the instructional needs of those particular students. Although effective personnel policies can optimize the selection and assignment of quality teachers, their quality must be maintained by providing relevant professional development for teachers throughout their career. This is addressed in Chapter VI.

[35] Oregon Legislative Assembly. (2001). *Chapter 342 — Teachers and Other School Personnel – 2001 Edition*. Material provided by the Legislative Counsel Committee of the Oregon Legislative Assembly.

VI Professional Development

One of the milestones the Government of Canada has identified in its 2002 report, *Knowledge Matters: Skills and Learning for Canadians* is that:

Within five years, businesses increase by one-third their annual investment in training per employee[1] in order to ensure Canada's current and emerging workforce is more highly skilled and adaptable.[2] More than half of the workforce of 2015 is already in the labour market.[3]

The importance of being lifelong learners is a major direction stated in the federal government's two papers[4] outlining strategies to position our country's workforce to compete in the global economy of the future. The Federal-Provincial-Territorial Ministerial Council on Social Policy Renewal Public Dialogue on the National Children's Agenda: Developing a Shared Vision (June 2000) declares

As a nation, we aspire to have children who achieve physical, emotional and social development, language skills, literacy, numeracy and general knowledge to the best of their capabilities, and are ready for learning throughout their lives so they can gain the abilities they need for present and future fulfilment.

Even more specifically, the *Knowledge Matters* report articulates the following goal: to give our children and youth the best possible start in life.

Specific milestones for measuring progress toward this goal should include the following:

- *Canada becomes one of the top three countries in mathematics, science, and reading achievement;*
- *all young Canadians are computer and Internet literate by grade school graduation;*
- *all students who graduate from high school achieve a level of literacy*

[1] *Knowledge Matters: Skills and Learning for Canadians*. (2002). Hull: Human Resources Development Canada, p. 9.
[2] *Ibid.*, p. 9.
[3] *Ibid.*, p. 2.
[4] The other paper published at the same time is Achieving Excellence: Investing in People, Knowledge and Opportunity, Human Resources Development Canada, Hull, 2002.

sufficient to participate in the knowledge-based economy; and

- *the proportion of high school graduates who have a working knowledge of both official languages doubles.*[5]

In order to achieve these ambitious goals, Canada will require a skilled teaching force that bases its practice on research. Professional development to support teachers' continuous learning is a critical factor.

The issues to be considered in this chapter are: Why is ongoing development vital to teacher quality? What are the standards for effective professional development? Who should have control over professional development? Where will time for adequate professional development be found? Who should fund it? What innovative practices are occurring?

Since teachers have the most direct, sustained contact with students and considerable control over what is taught and the climate for learning, improving teachers' knowledge, skills and dispositions through professional development is a critical step in improving student achievement.
King and Newman (2000)

The Link between Professional Development and Teacher Quality

Effective teacher preparation programs, selective hiring and judicious assignment of teachers based on qualifications and evaluations can increase the quality of the work force. It is ongoing professional development, however, which expands the capacity of teachers to adapt to meet new challenges and develop the requisite skills and knowledge. Fullan hypothesizes:

Twenty-five percent of the solution is attracting good people to the profession and providing them with the best possible initial preparation. This would be no mean feat, as solid teacher preparation programs are in the minority; 75% of the solution is ensuring that they have a place to work that enables them to learn on the job.[6]

Although schools are envisioned as professional learning communities,[7] many times the vision and the reality do not meet. *While teacher preparation and professional development should be focused on a set of shared knowledge, skills, and commitments,*[8] agreement on what comprises this set

[5] Knowledge Matters: Skills and Learning for Canadians. (2002), p. 2.

[6] Fullan, M. (2001). *The new meaning of educational change* (third edition). Toronto, Ontario: Irwin Publishing, p. 237.

[7] Ibid., p. 270-1.

[8] National Commission on Teaching and America's Future. (1996, September). *What matters most: Teaching for America's future*. New York: NCTAF, p. 19.

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is not universal. Even where there is agreement, practical issues such as funding, time schedules and delivery options may conspire to make professional development ineffective. The consensus is growing that continual learning on the job throughout their career is essential for all teachers as it increases teacher quality and therefore student achievement.

Standards for Staff Development

There are various standards or criteria for effective staff development. One of the most respected internationally is the revised Standards for Staff Development of the National Staff Development Council (NSDC) (see Figure 6.1). The revision was guided by three questions:

What are all students expected to know and be able to do?
What must teachers know and do in order to ensure student success?
Where must staff development focus to meet both goals?

Drawing on best practice and the research available, NSDC recommends that staff development must be results-driven, standards-based, and job-embedded.

Another useful set of criteria for high-quality staff development is presented by the National Education Foundation for the Improvement of Education (see Figure 6.2). Most effective staff development programs try to address the issues raised in both the NDSC Standards and the NIFE criteria.

Figure 6.1 - NSDC Standards for Staff Development

NSDC STANDARDS FOR STAFF DEVELOPMENT

Staff development that improves the learning of all students:

CONTEXT

Learning Communities

- Organizes adults into learning communities whose goals are aligned with those of the school and district.

Leadership

- Requires skilful school and district leaders who guide continuous instructional improvement.

Resources

- Requires resources to support adult learning and collaboration.

PROCESS

Data-Driven

- Uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement.

Evaluation

- Uses multiple sources of information to guide improvement and demonstrate its impact.

Research-Based

- Prepares educators to apply research to decision making.

Design

- Uses learning strategies appropriate to the intended goal.

Learning

- Applies knowledge about human learning and change.

Collaboration

- Provides educators with the knowledge and skills to collaborate.

CONTENT

Equity

- Prepares educators to understand and appreciate all students,create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement.

Quality Teaching

- Deepens educators' content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepares them to use various types of classroom assessments appropriately.

Family Involvement

- Provides educators with knowledge and skills to involve families and other stakeholders appropriately.[9]

[9] National Staff Development Council at http://www.nsdc.org/educatorindex.htm

Figure 6.2 - NFIE Criteria for High-Quality Professional Development

The NEA Foundation for the Improvement of Education (NFIE) defines high-quality professional development as that which:

- has the goal of improving student learning at the heart of every school endeavour
- helps teachers and other staff meet the needs of students who learn in different ways and who come from diverse backgrounds
- provides adequate time for inquiry, reflection, and mentoring and is an important part of the normal working day of all public school educators
- is rigorous, sustained, and adequate to the long-term change of practice
- is directed toward teachers' intellectual development and leadership
- fosters a deepening of subject-matter knowledge, a greater understanding of learning, and a greater appreciation of students' needs
- is designed and directed by teachers, incorporates the best principles of adult learning, and involves shared decisions to improve the school
- balances individual priorities with school and district needs and advances the profession as a whole
- makes best use of new technologies
- is site-based and supportive of a clearly articulated vision for students.[10]

Responsibility for Professional Development

Staff Development Practice in Canada

Professional development in Canada often refers to activities which a teacher undertakes to further personal or professional growth. Teachers often are able to choose those activities that they deem appropriate. Generally they are not required to be undertaken with other members of their school or district or be imbedded in the needs of the students of the school in which they teach. In today's context of school improvement planning and annual school and district wide goals, this practice raises an important question: Should individual teachers have the autonomy to determine all of their professional development activities or should the needs and educational goals of the school have precedence?

[10] NEA Foundation for the Improvement of Education.(2000, Spring). *Engaging Public Support for Teachers' Professional Development*. Proceedings of NFIE's Public Engagement Symposium.

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Most Canadian teachers' associations have policies related to professional development. Similar to the example from the Ontario Secondary School teachers Federation (OSSTF) (see Figure 6.3), these policies usually state that the right to determine professional development activities belongs to the member or the association. This naturally can lead to issues of control, as school districts in their role as employers, the provincial or territorial governments as policy-makers, and in two provinces the College of Teachers as professional governing bodies, all believe that they also have some rights to determine professional development activities.

Figure 6.3 - OSSTF Policy 8 - Educational Issues

OSSTF Policy 8 - Educational Issues (EDIS Policy) (A.91)

8.1 Professional Development Activities

8.1.1 It is the policy of OSSTF that members should have the right to determine the objectives and programs of their professional development activities. (A.88)

8.1.2 It is the policy of OSSTF that Professional Development Days and their format should be selected by the District or Division elected or appointed representatives. (A.82)

8.1.3 It is the policy of OSSTF that it is the professional responsibility of members to participate actively in professional development programs. (A.88)

8.1.4 It is the policy of OSSTF that professional development should be an activity that is designated specifically for the personal and professional growth of members and will be an activity that is initiated by, planned by, implemented by, and evaluated by member(s) and/or their elected or appointed representatives.(A.88)

8.1.5 It is the policy of OSSTF that a professional activity should be an activity that is considered to be essential to the functioning of the educational system. Such activities would include parent-teacher interviews, program development, evaluation, marking, promotion meetings, activities that are essential for the opening and closing of school such as clean-up and inventory, informal meetings and curriculum development.

8.1.6 It is the policy of OSSTF that all members should have access to a variety of ongoing professional development growth opportunities to assist with the planning and implementation of effective and innovative educational practices. (A.91)

8.1.7 It is the policy of OSSTF that members should be provided with a variety of opportunities to collaborate, share ideas and reflect upon educational concerns. (A.91)

8.1.8 It is the policy of OSSTF that professional development should not be imposed on Members by the Ontario College of Teachers or any other body. (A. 99)[11]

[11] Ontario Secondary School Teachers' Federation. *OSSTF Policy Statements*. Retrieved from www.osstf.on.ca/www/handbook/2000/policies2000.pdf

Policy which provides individuals with unfettered rights to determine their own professional development activities can be detrimental to professional growth at the school or district levels. As Elmore suggests, *improvement is . . . a function of learning to do the right thing in the setting where you work*[12] and as Fullan postulates *25% of the solution is having good directional ideas; 75% is figuring out how to get there in one local context after another*[13] which is near impossible to do without coordinated teamwork within a school.

Professionalism can be ensured only when professionals see themselves as life-long learners. Such a requirement is realistic only if accompanied by facilitating structures that provide support, sustained focus and reflect the best of what is known about teaching and learning.[14]

Professional development as it is usually referred to in the current research is school-based and is designed to produce measurable increases in student achievement. Grimmett and Echols (2001) believe that using the school as both the site and context of professional development encourages educators to examine their values and practices together. This permits *the co-construction of a collaborative culture in the school, one in which administrators and teachers are encouraged to lead and learn from one another.*[15]

Schools where teachers focus on student work, interact with colleagues to plan how to improve their teaching, and continuously bring new skills and knowledge to bear on their practice are also schools that produce the best results for children.[16]

Professional Development Models in Two Provinces

Ontario's Mandatory Professional Learning Program will require a teacher to have completed 14 Professional Learning courses by the end of each five year cycle of teaching. Each course must be a minimum of five hours. Seven of the 14 courses must be from options under any or all of seven broad categories: curriculum, special education, classroom management, and lead-

[12] Elmore, R. (2000). *Building a New Structure for School Leadership*. Washington: The Albert Shanker Institute, p. 25.

[13] Fullan, M. (2001). *The new meaning of educational change (third edition)*. Toronto, Ontario: Irwin Publishing, p. 268.

[14] Province of British Columbia. (2002, March). *A Future for Learners: A Vision for Renewal of Education in British Columbia*. Select Standing Committee on Education Report, The Legislative Assembly of British Columbia, Victoria.

[15] Grimmett, P. & Echols, F. (2001, May). *Teacher and administrator shortages in changing times: Avoiding the dilemma of saving the train from hijackers to find there's no train left!* Paper presented at the 2001 PCERA Symposium; Teacher Education/Educator Training: Current Trends and Future Directions, Laval University, Quebec City, p. 16.

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ership, technology, teaching strategies, communication with parents and students, and student assessment. Each teacher can choose seven electives or specializations in their area(s) of particular interest. Courses must be delivered by approved providers as determined by the Ontario College of Teachers and meet standards including an assessment component, have a student focus and be linked to Standards of Practice. This program will remain separate from performance appraisal unless the teacher chooses to link aspects of both processes.[16]

In Alberta, Teacher Professional Growth Plans (TPGPs) were created under policy 2.1.5 Teacher Growth, Supervision and Evaluation (Alberta Learning, 1998).[17] All teachers must create and maintain a professional growth plan to be reviewed annually by their supervisor, specifying at least three goals for professional development at the beginning of each school year. A year-end review written by the teacher examines actions and outcomes to meet the goals in terms of teacher learning. After being reviewed by the principal, the plan may not be shared without the teacher's initiation and permission or be used for purposes of teacher evaluation. This policy supports the concept of teachers as self-directed professionals while reassuring the public that each teacher's practice is examined annually.

Funding of Staff Development

Private sector employers invest in employees because they know it *aids recruitment and retention, boosts productivity and morale, and adds to the bottom line.*[18] In contrast, professional development activities in the public education sector are chronically under-funded.

The Education Improvement Commission compared Conference Board of Canada statistics on investment in professional development and training. Across all employment sectors, the average amount spent per employee was $776, or 1.6 per cent of payroll. In the health and education sectors, the average amount spent per employee was $423.[19]

[16] Ontario College of Teachers. Professional Learning Program. Retrieved from http://www.oct.on.ca/english/pip/default.asp

[17] Alberta Learning. *Policy, Regulations and Forms Manual - Section 2 - Accountability in Education Policy Requirements: Policy 2.1.5 - Teacher Growth, Supervision and Evaluation.* Retrieved from http://www.learning.gov.ab.ca/educationguide/pol-plan/polregs/215.asp

[18] Stewart-Patterson, D. (2002, February 13). *Improving Public Education: How Business Can Help.* Notes for remarks to Canadian Council of Chief Executives, Toronto, p. 6-7.

[19] Province of Ontario. (2000, December). *The Road Ahead – V: A Report on Improving Student Achievement.* Toronto: Education Improvement Commission, p. 12.

This expenditure ratio is similar to the United States where, according to the National Staff Development Council, *the typical American school district currently allocates only about 1% of its total budget for improving the abilities of its staff.*[20] Odden and Kelley (1995) believe that *professional development funding should be no less than 2-3% of the operating budget.*[21] The Ontario Task Force recommends *that the Ministry of Education increase its level of support for professional development within the education funding formula to an amount equal to 1.6 % of the payroll of district school boards, and that it require boards to use these funds exclusively for the professional development of their employees.*[22] The Ontario Task Force continues on to state that it is necessary to invest in continuous professional development *aimed at improving teachers' expertise in their subject areas and teaching techniques [as] is a necessary building block for school improvement.*

While Alberta has not set numerical targets, the government's Business Plan 2002-2005 articulates the following strategy and initiatives:

Strategy 2.1.1 Ensure that teaching and instruction in Alberta's funded learning system is consistently of high quality.
Initiative a: Research and report on the effectiveness of teacher preparation.
Initiative b: Develop a plan for pre-service/in-service programs that enhance the skills of teachers in integrating technology in consultation with education and provincial professional development providers.[23]

Once all levels of governments responsible for public education, including school boards, have committed to allocating more funding, methods for improving the effectiveness of in-service programs must still be found.

[20] Sparks, D. & Hirsh, S. (1999). *A National Plan for Improving Professional Development.* National Staff Development Council.

[21] Odden, A. & Kelley, C. (1995, September). *Reinventing Teacher Compensation Systems.* CPRE Finance Brief.

[22] Province of Ontario. (2001, June). *It's All About Improvement: The Report of the Task Force on Effective Schools.* Recommendation 9, p. 19.

[23] Government of Alberta. *Learning: Business Plan 2002-05, Strategy 2.1.1* Initiatives (a) & (b). Retrieved on http://www.treas.gov.ab.ca/publications/budget/budget2002/learn.html

Innovative Practices

Ways to Create Time for Professional Development

McDiarmid (1995) defines mental space as *the opportunity for teachers to get away from their classrooms both mentally and physically to think about their work.*[24] Such space is necessary for teachers to be able to analyze and reflect on their craft. Figure 6.4 provides some examples of how the school calendar and schedule might be re-structured to provide quality time to support teacher learning.

Figure 6.4 - How to Create Professional Development Time

How to Create Professional Development Time

Purnell and Hill (1991) identify six general approaches to creating time for staff development:

- Promote time outside the classroom during the school day (e.g., use substitutes to free teachers to attend workshops, conferences, observe other classes).
- Refocus the purpose of existing time commitments (e.g., use faculty meetings).
- Reschedule the school day (e.g., adjustments are made in the master schedule).
- Increase the amount of available time (e.g., use of supplemental contracts and stipends for teachers to attend summer trainings, extend participation beyond the usual hours).
- Promote teachers volunteering some of their time (e.g., create conducive conditions such as babysitting services, allocate space for teachers' conference).
- Promote more efficient time use (e.g., make meetings more efficient, use technology).[25]

In addition, Raywid (1993) cites a number of examples for creating professional development time:

- Use part or all of faculty, department, or team meetings for professional development.
- Lengthen the school day for 20 minutes four days per week; use an early release on the fifth day to provide an extended period of time for professional development.
- One morning per week, engage students in alternative activities such as community service that are supervised by parents, community members, or noninstructional staff; use this time for professional development.
- Provide a common scheduled lunch and planning periods for teachers working on joint projects.[26]

[24] McDiarmid, G.W. (1995, April). *Realizing new learning for all students: A framework for the professional development of Kentucky teachers.* (NCRTL special report). East Lansing, MI: National Center for Research on Teacher Learning, p. 6.

[25] Raywid, M. (1993). Finding time for collaboration. *Educational Leadership*, 51(1), 30-34.

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There is often a misperception that teachers are not working when they are not directly involved with students. Professional development activities may be seen by the public as self-serving or as a holiday from work. The British Columbia Teachers' Federation reports that teachers participate in many professional development activities and preparation for the next school year during the summer holidays [27], yet there is no official recognition of these activities. The United States Department of Education recommends teaching become a year-round occupation and offers grants to school staffs who use the summer months for school planning and in-service training activities. Restructuring the year to space student holidays more evenly with smaller gaps between school sessions, has been proven to improve achievement levels for students who live in less affluent circumstances[28] and those whose first language is not the language of instruction[29]. The Alberta government has identified the need for conducting an impact study of year-round schooling options on student achievement [30] as has the federal government, through the Social Sciences and Humanities Research Council. [31] Reorganizing the school calendar may also positively impact the quality of professional development programs for teachers.

Common Planning Time or Lesson Study

Common planning days or weeks when students were not scheduled to be in school would allow prolonged school-based professional development activities to occur with teachers. NFIE presents the following recommendations:

Japanese and Chinese teachers offer demonstration lessons to each other, intensively discussing the nuances of specific concepts, how they might be presented, what kinds of questions students might have, and what kinds of questions teachers should ask to elicit student interest (Stigler & Stevenson, 1991). German teachers hold "curriculum conferences" within the school to develop class materials and look at student work (Ratzki, 1988). These school structures assume that teachers must see students whole and continually consult with one another to make wise instructional decisions.[34]

[26] Purnell, S., & Hill, P. (1992). *Time for reform*. Santa Monica, CA: Rand.

[27] Schaefer, A. (2001, December). *How I spent my summer vacation: Time-use data from the Spring 2001 BCTF Worklife of Teachers Workload Issues and Stress Survey*. BCTF, Vancouver, B.C.

[28] Gandara, P. & Fish, J. (1994, Spring). Year-Round Schooling as an Avenue to Major Structural Reform, *Educational Evaluation and Policy Analysis*, 16(1), p. 67–85.

[29] Weaver, T. (1992). Year-Round Education, *ERIC Digest* (ERIC Clearinghouse on Educational Management), 68. Retrieved from http://ericir.syr.edu/plweb-cgi/obtain.pl .

[30] Government of Alberta. *Learning: Business Plan 2002-05, Strategy 2.1.1* Initiatives (a) & (b).

[31] Province of Ontario. (2001, June). *It's All About Improvement: The Report of the Task Force on Effective Schools*, p. 41. The purpose of the proposed research is to determine the relationships between changing to a form of "year-round" calendar and issues of equity and social justice. Canadian researchers, under the leadership of Dr. Carolyn M. Shields, will study four jurisdictions: Alberta, Ontario, California, and Florida.

Redefine the teaching job to include both direct student instructional time and blocks of extended time for teachers' professional development. Extend the length of the school year, allowing for up to four weeks for teachers' professional development while students are on vacation. Organize the teachers' year to include intensive, sustained study by staff as determined by school-based decisions directed toward increasing student learning. Intensive study should be supported by year-long follow-up.[32]

Stigler & Stevenson observe that in Asian schools *there is a very systematic effort to pass on the accumulated wisdom of teaching practice to each new generation of teachers and to keep perfecting that practice by providing teachers the opportunity to continually learn from each other.* [33]

Japanese teachers meet daily with their colleagues in time assigned away from students with the majority of this time being used for common planning and reflection. This compares unfavourably with the individual "prep time" common in our schools. The Ontario report echoes this: *We also addressed the need for teacher planning meetings by subject area, grade level, and division. We suggest that time for this type of collaboration does not happen nearly enough.*[35]

Teacher-Led Professional Development Centres

Teacher-Led Professional Development Centres are being established at different locations in the United States. Their mandate is to *help teachers address their practice to results and help define responsibility for results*,[36] and the concept is strongly supported by unions.[37] Some of the criteria and functions of these centers are listed in Figure 6.5.

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[32] NEA Foundation for the Improvement of Education. (1996). *Teachers Take Charge of Their Learning: Transforming Professional Development for Student Success*. Washington.

[33] Stigler, J.W. & Stevenson, H.W. (1991, Spring) How Asian teachers polish each lesson to perfection. *American Educator*, p. 12-47.

[34] Darling-Hammond, L. (1997). *The Right to Learn: A Blueprint for Creating Schools that Work*. San Francisco: Jossey-Bass, p. 195.

[35] Cooke, D. (2002, Winter). It's All About Improvement, *SAEE - Education Analyst*, 5(1).

[36] NEA Foundation for the Improvement of Education. (1999, August). *Creating Teacher-Led Professional Development Centers*. Proceedings of a symposium held in Portland, Oregon co-sponsored by NFIE and the division of Affiliate Capacity Building of the National Education Association.

[37] These centers should be "an integral part of union activity, just like our efforts around hours, wages, and working conditions," in the words of John Perez, vice president of United Teachers Los Angeles." NEA Foundation for the Improvement of Education. (1999, August). *Creating Teacher-Led Professional Development Centers*. Proceedings of a symposium held in Portland, Oregon co-sponsored by NFIE and the division of Affiliate Capacity Building of the National Education Association.

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Figure 6.5 - Teacher-Led Professional Development Centres

Teacher-Led Professional Development Centres should:

- *be inclusive rather than exclusive by serving all members of the education community*
- *be coordinated from a place external to the schools, but serve to embed professional development within the day-to-day work of schools.*
- *should organize a wide variety of activities carried out by a partnership whose goal is the continuous improvement of instruction leading to gains in student achievement.*
- *serve as a safe haven for individual and collective risk-taking*
- *involve all of the teachers in the area served by the center*
- *make use of the leadership skills that teachers acquire at various stages in their career*
- *build bridges between what is mandated, what teachers and administrators say they need, and what is best practice*
- *help negotiate shifts in mandates*
- *generate work that leads to better policies and help legislatures to frame productive, research-based mandates*
- *link the learning in one school to another*
- *bring resources from the local area and from outside it*
- *serve as a clearinghouse for high-quality professional development*
- *be the broker or matchmaker between needs and resources, and be responsive to schools and the decisions they make about how to improve*
- *focus on standards for student learning*
- *provide a long-term focus on changes in knowledge and practice, with follow-up in school sites*
- *ensure the presence of qualified building-based teacher mentors/coaches with few or no other duties; set criteria for these positions; train the incumbents*
- *build effective school teams, inclusive of the principal*
- *transform the principal into the chief instructional leader*
- *connect to the school improvement plan and school improvement process/management process*
- *be established external to the district or existing state education bureaucracy*
- *be teacher-led*
- *rise above politics but be able to use the union's power to achieve professional goals*

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These centres become not only a place for remediation and professional growth but also encourage innovation and risk-taking. They are designed as providers, advocates and facilitators of training as well as a place to formulate a vision and its enabling policies. According to the NFIE symposium:

The center could also be an important source for documenting the link between high-quality professional development and student results, gathering data to disseminate to school boards, legislators, and schools. Professional development centers themselves should be sources of new ideas — places that help to set the policy agenda based on research and best practice.[38]

Professional development in Canada should be based on research and best practice; supported by policy and practice by all stakeholders; and reflect a vision of schools as *professional learning communities* whose prime purpose is to enhance student learning. This will require collaboration between unions, districts, governments, professional associations, and teachers colleges, rather than a struggle over control of professional development. In conjunction with such collaboration, increased funding, innovative scheduling, and a greater emphasis on school-embedded training will pay important dividends in teacher quality and student achievement in Canada.

[38] NEA Foundation for the Improvement of Education. (1999, August). *Creating Teacher-Led Professional Development Centers*. Proceedings of a symposium held in Portland, Oregon co-sponsored by NFIE and the division of Affiliate Capacity Building of the National Education Association.

VII Evaluation

The public, policymakers and the education community all agree: Improving teacher quality is essential to improving student achievement. What is in contention here is how these different groups define "teacher quality" and view "teacher improvement," and the implications of these diverse perspectives for teacher evaluation, in general, and peer assistance and peer assistance and review programs, in particular.[1]

The issues to be considered in this chapter are: What is the relationship of evaluation to teacher quality? What is current evaluation practice? How can evaluation influence hiring, assignment, retention, advancement, professional development and compensation? How do peer assistance and peer review programs change the evaluation paradigm?

Why Is Teacher Evaluation Important for Teacher Quality?

Although teacher performance appraisal occurs in many different formats, its two main purposes are improvement and accountability. The evaluation provides teachers an opportunity to increase their expertise by reflecting on their practice in a systematic manner with another educator. For personnel purposes, evaluation is usually a tool to recognize performance quality and to help teachers further improve their practice. Only rarely is teacher evaluation used as a tool to terminate employment.

The second purpose of monitoring teaching performance is to ensure standards are maintained. At the classroom and school levels, this information is required to ensure that students are being provided satisfactory learning opportunities. At the system level it is required to provide the public with quality assurance. The importance of such monitoring is readily apparent when one recognizes that a single elementary teacher can affect the learning of at least 25 students per year or approximately 875 students in a career. A secondary teacher influences learning outcomes for a wider group of students, perhaps 175 learners a year or 6,125 young people in 35 years.

[1] American Federation of Teachers & National Education Association. (1998). *Peer Assistance & Peer Review.* An AFT/ NEA handbook prepared for Shaping the Profession That Shapes the Future. An AFT/NEA Conference on Teacher Quality, September 25–27, 1998, Washington, DC. p. 6.

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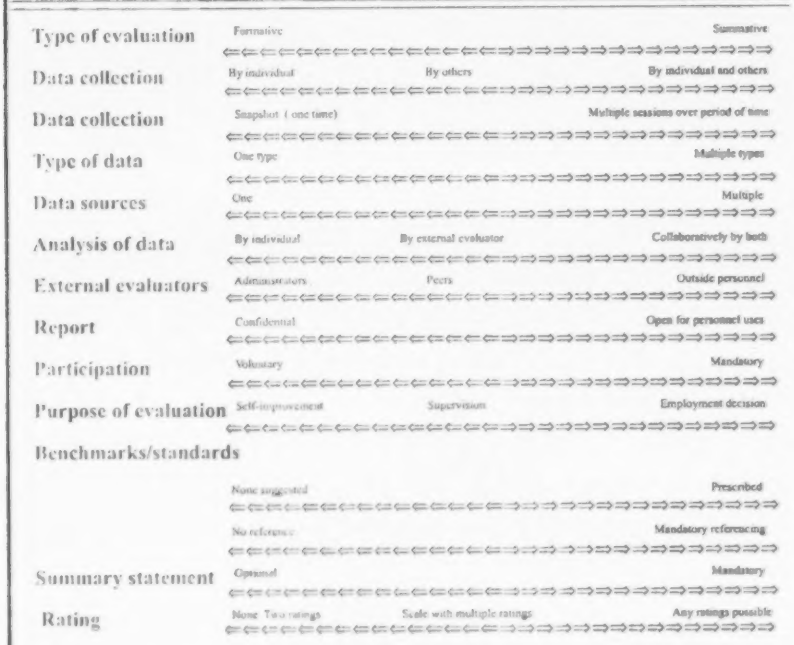
Differences in Evaluation Processes

In general, the evaluation process for teachers lacks the rigor of many other professional or technical vocations and is inconsistent from district to district. Evaluation processes can result in either formative or summative evaluation reports, depending upon the framework and the purpose of the evaluation. Evaluation processes can be voluntary or mandatory depending upon legislation, certification, collective agreements, perceived teacher performance and teacher choice. In some cases, collective agreements prohibit formal teacher evaluation after initial probationary period unless there is sufficient and obvious cause.

Evaluation processes can vary widely in type, data collection and analysis, participants, and end products. Figure 7.1 suggests the range of variables in teacher evaluation instruments.

Figure 7.1 - Some Variables in Evaluation Process



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Current Practice

Evaluation can range from informal to formal and from suggested to prescriptive models. Many evaluation processes are detailed in collective agreements with the roles of administration, both school and district, the teacher and the union being prescribed. Indeed in many jurisdictions even the language to be used in any report may be prescribed, e.g., *2.1.5: It is the policy of OSSTF that no evaluation reports should contain a rating statement other than satisfactory or unsatisfactory. (A.86)*[2]

However evaluation processes are beginning to change. For example, the Ontario government is planning four ratings of teacher performance: *exemplary* and *good* in addition to the traditional *satisfactory* and *unsatisfactory*.[3] As well beginning in the fall of 2002, both parents and senior students can provide input into a teacher's appraisal.[4] Current teachers will be evaluated every three years, while new teachers will be evaluated twice a year in each of their first two years in the classroom.

Evaluation Standards

Every evaluation process should have standards delineated as benchmarks so that evaluation remains objective and not subject to the biases of the individual evaluator. The standards should be based on research and best practice.

A recent federal government report states that Alberta has *the most comprehensive competency, growth and teacher evaluation benchmarks in Canada. The Quality Teaching Standard ministerial order is the first of its kind in Canada. The Standard applies to teacher training and certification, professional development, supervision and evaluation.*[5] The Alberta Teacher Growth, Supervision and Evaluation Policy states that teachers pursue lifelong learning and develop an annual professional growth plan with the provision that instead of a set time cycle for evaluations, principals evaluate any teacher who may not be meeting the Quality Teaching Standard. Ontario is currently developing new provincial standards for performance ap-

[2] Ontario Secondary School Teachers' Federation. *OSSTF Policy Statements*. Policy 2 - Collective Bargaining Evaluation (CBEV Policy) (Supervision for Growth and Performance).

[3] Province of Ontario. (2001, October 15). *Backgrounder: Supporting teacher quality and teaching excellence : the Quality in the Classroom Act*, p. 1. Retrieved from http://mettowas21.edu/gov.on.ca:80/eng/document/nr/01.10/bg1015.html

[4] Province of Ontario. (2002). *Supporting Teacher Excellence: Teacher Performance Appraisal Manual*, p. 11. Retrieved from http://edu/gov.on.ca/eng/teacher/teacher.html

[5] Government of Canada. (2001). *Canada and the Summits of the Americas: A National Report. Government of Canada*, p. 13. Retrieved from http://www.americascanada.org/eventsummit/documents/nationalreport-e.pdf

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praisal so that principals can evaluate teachers in a fair and consistent manner.

In the United States, two well-known sets of standards are The National Board for Professional Teaching Standards (NBPTS) and The Beginning Educator Support and Training (BEST) Program. As in Canada, many districts have also developed standards or performance tables. For example, Connecticut has created the CCT Performance Table: A Career Continuum using: The Connecticut Common Core of Teaching (CCT), The Connecticut Competencies Instrument (CCI), The Beginning Educator Support and Training (BEST) Program portfolio rubric, and The National Board for Professional Teaching Standards (NBPTS), and Five Core Proposition Statements[6] (See Figure 7.2).

"Teachers (and teacher unions) don't hire, evaluate or tenure teachers: administrators do. But the whole process would be a lot better if teachers were able, as a profession, to take responsibility for themselves."[6]

(Albert Shanker, former President, American Federation of Teachers)

Figure 7.2 - CCT Performance Table: A Career Continuum

CCT Performance Table: A Career Continuum

This document is meant to serve as a resource for teacher evaluation and professional development. As a performance table, it aims at providing an understanding of a teacher's career continuum... constructed primarily with the experienced (3+years) teacher in mind.

The career continuum runs from the pre-service and novice years (Pre-Service and Competent), through and beyond tenure (Competent and Accomplished), to National Board Certification or to a teacher-leader position (Master).

[The] many ways this document may be used at the school level for the purposes of teacher evaluation and professional development include:

- *as a professional development tool for administrators and teachers to better understand the CCT.*
- *to help define and understand acceptable levels of performance as defined by the CCT.*
- *to help locate a teacher's performance at a specific point in time, using the CCT. (to be used with data)*
- *to help develop annual or multi-year goals and objectives focused on specific areas of the CCT.*
- *as a tool for administrators to conference with teachers around selected areas. (to be used with data)*
- *as a tool for teachers to self-assess their professional progress over their career.*
- *to individualize feedback, goal-setting, and professional development, replacing a one-size-fits-all culture of professional growth.*[7]

[5] Connecticut State Department of Education: Division of Research and Evaluation: Bureau of Evaluation and Educator Standards. (2002, April). *CCT Performance Table: A Career Continuum 2002 Teacher Evaluation Resource Instrument (Draft).*

[7] Ibid.

[6] Shanker, A., former President, American Federation of Teachers, as quoted on AFT web page http://www.aft1250.org

Impact of Evaluation Process

Successful completion of an evaluation process within a specific time period is sometimes required in order for a teacher to obtain tenure. In other circumstances, e.g., initial hiring to a district or for consideration for advancement, an evaluation does not need to be completed at that time, but previous evaluation reports (teaching or practice teaching) are usually referenced.

An unsuccessful evaluation can trigger a remediation process to help improve the teacher's performance. If the teacher cannot or will not demonstrate the ability to meet the stated standard, the teacher may be dismissed or not have his/her contract renewed. Evaluation results can determine suggested or mandatory action plans for professional development. Finally, evaluations can influence certain aspects of the teacher's compensation in some jurisdictions.

Dismissal as a result of unsatisfactory performance does not occur as often as would be expected. A recent meta-analysis concludes that *expert opinion and empirical research indicate 5 to 15% of public school teachers in the United States perform at incompetent levels. However, the termination rate which includes resignations, dismissals of tenured teachers, and non renewals of probationary teachers is less than 1%*[9]. A survey of BC principals indicates that approximately one in 35 evaluations resulted in "less than satisfactory" reports[10]. In Ontario, as in other jurisdictions, data do not appear to be available on the number of teachers not performing satisfactorily and who are not dismissed, but estimates suggest the numbers are low.[11]

Consistent and regular evaluation processes can be a powerful tool for improving teacher quality if there is follow-through on unsatisfactory performance should remediation efforts not succeed. Unfortunately the time, expense and perceived lack of success in contested dismissals discourage many administrators.

"Instead of capitalizing on lousy, top-down teacher evaluation systems that make it too easy to get tenured, that are indifferent about teachers who are falling down on the job and offer no assistance to teachers who need help, let's negotiate a peer review and intervention program. Because believe me, no one is more knowledgeable and rigorous about teacher performance than first-rate teachers!" [12]
(Sandra Feldman, President, American Federation of Teachers)

[9] Tucker, P. (2001, February). Helping Struggling Teachers. *Educational Leadership*, 58(5), p. 52.
[10] Edgar, B. (1997). Tough Calls. *Adminfo*, BC Principals and Vice-Principals Association, p. 10-11.
[11] Province of Ontario. (1995). *For the Love of Learning: Report of the Royal Commission on Learning*, Section 12 (c).

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Peer Assistance and Peer Review Programs

Definitions of Peer Assistance and Peer Review Programs

Peer assistance and peer review programs fulfil two distinct functions. A peer assistance program can exist without a peer review program, but the opposite is not true. A peer review program without a peer assistance program is not educationally sound.

The AFT/NEA believe that peer assistance programs help new and veteran teachers improve their teaching knowledge and skills. New teachers or struggling veterans are linked with consulting teachers who provide ongoing support through observing, modeling, sharing ideas and skills, and recommending materials for further study.

Peer review programs add a significant new element. Consulting teachers conduct formal evaluations and make recommendations to the administration of the school district regarding the continued employment of participating teachers. At that stage, the district is responsible for making the employment decision and the union is responsible for ensuring that the process was fair and equitable.[13] Their generic features are described in Figure 7.3.

Figure 7.3 - Peer Assistance and Peer Review Programs

Common Features of Peer Assistance and Peer Review Programs

- *are created through collective bargaining agreements or through joint affiliate/school district agreements in non-bargaining states;*
- *require a shared focus on improving teaching on the part of teachers and their union and the school district, including administrators;*
- *involve joint decisions by teachers and administrators;*
- *provide assistance to new teachers and/or veteran teachers who are at risk of termination due to poor performance; and/or veteran teachers voluntarily seeking to improve their teaching practice;*
- *have a process for identifying and training outstanding teachers to provide peer assistance, and, in a peer assistance and review program, peer evaluation; and*
- *have resources dedicated to implementing the program.*[14]

[12] Feldman, S., President, American Federation of Teachers, as quoted on AFT web page http://www.aft.org/edissues/teacherquality/CompEval.htm

[13] American Federation of Teachers & National Education Association. (1998). *Peer Assistance & Peer Review.* An AFT/NEA handbook prepared for Shaping the Profession That Shapes the Future, An AFT/NEA Conference on Teacher Quality, September 25–27, 1998, Washington, DC, p. 3-4.

[14] Ibid., p. 4.

***Differences** Among Peer Assistance and Peer Review Programs*

Peer assistance and review programs vary in regard to:
who is served;

- *the extent and kinds of services provided;*
- *whether the peer assistance is confidential;*
- *whether peer assistance is mandatory;*
- *whether consulting teachers evaluate teachers;*
- *whether consulting teachers make recommendations regarding termination or continued employment; and*
- *whether, or in what circumstances, terminated employees are provided with union representation.*[15]

Attitudes towards Peer Assistance and Peer Review programs

The changes required in traditional labor-management relationships in order to introduce peer assistance and peer review programs have the potential for causing controversy and meeting resistance both within the school district and also within union locals.[16] Kerchner, Koppich and Weeres (1997), in their book on "new teacher unionism," state that:

Peer review brings higher standards to teaching. It significantly changes the conception of teaching work by recognizing the importance of engagement and commitment as well as skill and technique. It recognizes a legitimate role for teachers in establishing and enforcing standards in their own occupation. For unions, it represents both a radical departure from established industrial norms and a rediscovery of traditional craft and guild union functions. Under peer review, the union's role balances protection of individual teachers with the protection of teaching.[17]

Most of the research and pilot projects on peer review and assistance to date have occurred in the United States. The AFT and the NEA share the view that the majority of teachers *support peer assistance and review programs and believe that assuring teacher quality is a joint union/management responsibility, [however] it is not unusual to find opposition among members who may be in the minority but who are most vocal about the issue.*[18] This opposition stems from four main concerns:

[15] Ibid., p. 4.

[16] Ibid., p. 9.

[17] Kerchner, C.T., Koppich, J.E. & Weeres, J.G. (1997). *United Mind Workers: Representing Teaching in the Knowledge Society.* Jossey-Bass: San Francisco, p.87.

[18] American Federation of Teachers & National Education Association. (1998). *Peer Assistance & Peer Review.* An AFT/NEA handbook prepared for Shaping the Profession That Shapes the Future, An AFT/NEA Conference on Teacher Quality, September 25–27, 1998, Washington, DC, p. 10.

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- favoritism by principals in choosing the peer reviewer;
- an "evaluator" role is not appropriate for teachers;
- "teacher evaluators" are supervisors;
- peer review compromises the union's ability to provide duty-of -fair representation should a terminated teacher file a grievance.[19]

AFT/NEA states that with proper introduction to all parties and careful construction and clear delineation of the program, the concerns of unions, school boards, administrators and teachers can be successfully addressed.

Examples of Peer Assistance and Peer Review Programs

Contract language for peer programs for the following school authorities: Toledo; Cincinnati; Rochester, N.Y.; New York City; Hammond; Minneapolis; and Columbus is readily available.[20] While each of these programs has unique features, they seem to be deemed successful by the stakeholders in each of their districts in improving teacher quality.

For example, Cincinnati's Peer Assistance and Evaluation program (PAEP) from 1986-1999 helped over 1900 beginning teachers. Of these, 54 interns who did not meet standards did not have their contracts renewed, which is double the rate for non-renewal before PAEP was implemented. Of the 123 veteran teachers referred to PAEP, 33 were deemed not to need intervention while 90 teachers were assigned to a consulting teacher for up to two years of intensive assistance. Twenty-seven teachers improved while the others retired, resigned, went on disability or were dismissed. The Cincinnati Federation of Teachers state that *"PAEP has improved teacher quality in CPS while nearly eliminating contested dismissals."*[21] The Cincinnati Public Schools District Office of Research and Evaluation has released a study that suggests a correlation that statistically links improving teacher performance as measured by teacher evaluation to improved student achievement. This data was gathered as part of the Teacher Evaluation System (TES) jointly developed by CPS administration and the Cincinnati Federation of teachers and launched in May 2000.[22]

[19] Ibid., p. 10.

[20] Ibid., Appendix B.

[21] *Cincinnati Federation of Teachers Update*, 1999, p. 2.

[22] Cincinnati Public Schools. (2002, March 3). *CPS Study Links Teacher Evaluation System to Student Achievement.*

Teacher evaluation processes are changing with more emphasis being placed upon the improvement of performance. Standards are being developed or revised to reflect research findings on teacher quality as those findings become more definitive. Nonetheless, the evidence suggests that the current evaluation practice in Canada requires greater rigor if it is to meet the quality assurance standards of other professions and achieve our ambitious national goals for student learning.

VIII Compensation

Individuals look at the compensation system not only to see what financial rewards they will reap, but also for signals about what kinds of attributes and contributions are valued.

The way we pay affects the behavior of teachers: how they teach and how they develop their teaching capabilities over time. Like all professionals, teachers have some level of control over their own practices and development. How they choose to direct their energies -inside the classroom and out —will be in part driven by what kinds of practices and capacity building habits are rewarded by the pay system.[1]

In Canada, as in the United States, there is no national teacher compensation schedule like those that exist in some countries such as France, Germany, and the United Kingdom. Canada exhibits diversity in compensation from province to province and even between neighbouring school districts.

In this chapter we explore the following issues: Is compensation a relevant factor in teacher quality? How are teachers in Canada compensated? How does their basic pay compare to that of other occupations? What incentives are used in Canada and other countries? How can compensation be integrated with broader strategies to enhance teaching quality? What issues need to be considered in determining compensation practices for the future?

Why Pay Matters

Hassel notes that researchers have documented for decades that teachers cite the primacy of "intrinsic rewards" when they discuss their choice of teaching as a career. Studies suggest that working conditions such as school leadership or parental support influence teacher decisions more than pay does when teachers are deciding whether to transfer schools or leave teaching. As pay is not the dominant factor in most teacher decisions, to improve

[1] Hassel, B. C. (2002, May). *Better pay for better teaching: Making teacher compensation pay off in the age of accountability.* Washington, DC: Progressive Policy Institute: 21st Century Schools Project, p. 4.

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teaching quality Hassel recommends a *multifaceted policy development, encompassing preparation, recruitment, selection, professional development, working conditions, and evaluation* not just an isolated revision of the pay scale. However, Hassel concludes that pay is still a relevant factor for teachers as he notes that other researchers have found that extrinsic rewards are more effective motivators for workers who also have high levels of intrinsic motivation.[2]

Current Compensation Practices

Basic Salary Grids in Canada

Compensation for teachers in Canada has been very structured and predicated upon recognized years of pre-service and in-service university education and recognized years of teaching experience. This has resulted in grids of salary placement detailed in collective agreements. Criteria for exact placement on the grid and processes to challenge grid placement are also outlined in collective agreements.

Whereas a generation ago many salary grids would have included categories for one, two or three years of recognized pre-service teacher training, most grids now begin at recognition of 4 years of pre-service teacher training and continue up to 6 years of university education. Recognition is given to the master's degree or equivalent but not usually for a doctorate or other post-graduate work.

Salary grids in Canada usually span a range of 0 to 11 years of experience[3] and provide salary steps in one or two year experience increments. School districts[4][5] salary grids differ due to the cumulative effects of their bargaining histories, e.g., some locals may have historically deemed better working conditions such as lower class sizes or richer benefit packages a higher priority than salary increases. The relative size of increments between increasing years of experience compared to the increments for further education may have initially reflected a philosophical stance, but more often now is a result of the cumulative effects of many years of bargaining and in

[2] Hassel, B. C. (2002, May). *Better pay for better teaching: Making teacher compensation pay off in the age of accountability.* Progressive Policy Institute: 21st Century Schools Project, p. 4-5.

[3] For example most B.C. districts have 9-11 steps to a maximum, although one of the 72 districts has seven steps and four districts have 12 steps. Schafer, A. (2001, September). *B.C. Teachers' Salaries as of 2001: Entrate Salary Minima and Maxima.* A BCTF report., p. 7.

[4] Districts in Ontario, Manitoba, Alberta and British Columbia have pay scales for each district whereas there are provincial or territorial pay scales for each of the four Atlantic Provinces, Quebec, Saskatchewan, Yukon, Nunavut and the Northwest Territories.

some instances legislation. Sometimes salary grids recognize the grade level that is being taught and often they reflect the relative remoteness of the district's geographic location.

Salary Comparisons across Canada

Salaries vary across Canada by province and also among school districts within a province (see Figure 8.1).

Figure 8.1 - Differences in Teacher Basic Salaries

Differences in Teacher Basic Salaries

For two teachers in Canada with the same credentials and experience (Category 5 Step 1 as of September 1, 2001), there could be as much as a 45 % difference in basic salary before any allowances are included.[5] Some salary differences might be explained as a result of geographic location, e.g., West Vancouver ($36,566)[6] vs. Nunavut ($53,173).[7]. However salaries also often vary among neighbouring urban school districts. For example, in British Columbia, *the median starting salary for a teacher with five years of university preparation who obtains a full-time contract is $39,270. Starting salaries vary even between Lower Mainland districts: a beginning Category 5 teacher can summon anywhere from $36,566 in West Vancouver, to $40,649 in Vancouver*[8] (approximately 11% difference). This type of variance in salaries is apparent also in other provinces without a provincial pay scale [9] as well as for TOCs or occasional teachers[10].

[5] See example this follows for difference between West Vancouver and Nunavut basic teacher salary.

[6] Schafer, A. (2001, September). *B.C. Teachers' Salaries as of 2001: Endrate Salary Minima and Maxima*. A BCTF report, p. 1-5.

[7] *Collective Agreement between the Federation of Nunavut Teachers and the Minister Riponsible for the Public Service Act (Nunavut)* (expires June, 2002), p. 93.

[8] The figures from this article have been increased by 2.5% to reflect the September 2001 salary increase. British Columbia Teachers' Federation. (2001, Spring). The Teacher Shortage, *Teacher Newsmagazine*, 13(6).

[9] Elementary Teachers' Federation of Ontario. *Quick Comparison of Public Elementary Collective Agreements*.

[10] British Columbia Teachers' Federation. (2001, Spring). The Teacher Shortage, *Teacher Newsmagazine*, 13(6).

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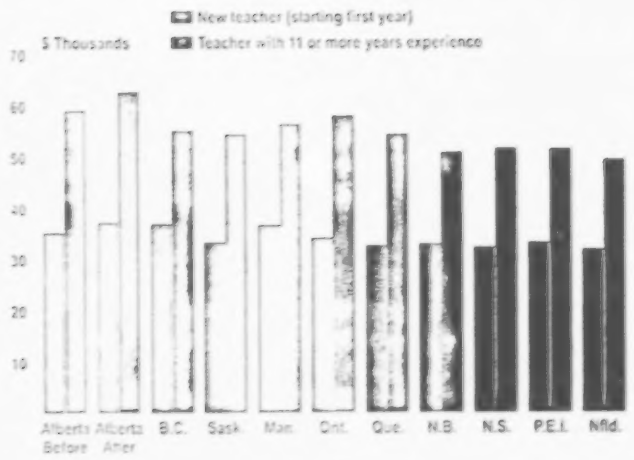
Figure 8.2 - Teacher Salary Comparison provides a pictorial representation of the relative salaries for new and experienced teachers.

Figure 8.2 - Teacher Salary Comparison



**Figures reflect the best information available as of January 28, 2002. It includes contract settlements for the 2001-02 school year for all provinces except NS and NFLD and contract settlements extending to 2002-03 for BC, NB, and PEI. Alberta's after salary amount includes a 4% salary increase for the 2001-02 school year and a 2% salary increase for the 2002-03 school year.
Salary comparison is for Category 4 or equivalent teachers having 4 years of educational background
*Average salary for a new teacher in Alberta is $37,418.
*Maximum average salary for a teacher with 4 years of education and 11 years experience is $62,930.
*Maximum average salary for a teacher with 6 years of education and 11 years experience is $67,785.

Allowances Commonly Paid to Canadian Teachers

In addition to the basic salary there are some financial allowances commonly available in different districts or regions in Canada. These include department head or curriculum responsibilities; vocational trades certificates; first aid certification and responsibilities; expense reimbursement for some itinerant teachers, e.g., mileage; and, working with a special student population. Some districts have additional items such as student teacher allowance, Early Retirement Incentive Plans (ERIPs), fellowships and sabbaticals.

Figure 8.3 compares the average incomes for full-time workers in each of the following occupations.

* Alberta Learning. Retrieved from http://www.learning.gov.ab.ca/k_12/teaching/FactsStatics/teacherpaid.asp

Salary Comparisons to Other Occupations

Figure 8.3 - Employment Income in Key Educator Occupations and Selected Occupations for Comparison

Employment Income in Key Educator Occupations and Selected Occupations for Comparison

(Average employment income for 1995 for full-time, full-year work)[12]

Occupation	Average Income
All Occupations in Canada average	**$37,556**
General Practitioner/Family Physicians	$107,620
Lawyers and Notaries	$81,617
University professors	$68,195
School principals/administrators elementary and secondary schools	**$64,513**
Commissioned Police (chiefs/ senior)	$63,518
Administrators in post-secondary education and vocational training	$58,845
Electrical Engineers	$57,054
Police Officers	$53,038
Pharmacists	$52,989
Psychologists	$51,123
Firefighters	$50,608
Systems Analysts	$49,502
Secondary school teachers	**$48,573**
School and guidance counsellors	**$47,994**
Financial Auditors and Accountants	$47,553
Audiologists/Speech Therapists	$46,748
College and other vocational instructors	$46,693
Head Nurses	$46,196
Elementary and kindergarten teachers	**$45,412**
Computer Programmers	$43,847
Registered Nurses	$40,326
Social Workers	$38,966

[12] Chart adapted from Table 11 in *The ABCs of Educator Demographics: Report of the findings of a situational analysis of Canada's education sector human resources.* (2002, January). CAETO: The Steering Group for the Situational Analysis of Canada's Education Sector Human Resources, p. 20. Data from Sources: Statistics Canada, 1996 Census of Canada, HRDC Special Data.

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Teachers' and school counsellors' average salaries ranged from 20% to 29% higher than the average income of all Canadian occupations. School administrators according to this data were approximately 71% higher than the average Canadian income.

Incentives

Incentives can be defined as positive motivational influences often in the form of enhanced working conditions or additional payments to employees as a means of increasing productivity. Traditionally most incentives in education have been implemented to address issues of teacher recruitment and retention especially in locations perceived as less desirable. However, with a perceived world-wide shortage of teachers growing more acute every year for the near future, school systems are offering an increased variety of incentives.[13]

As there are different supply and demand scenarios unfolding across Canada, recruitment and retention incentives tend to be specific to a given region. Some are comparatively new while others such as northern allowances have been in place for decades. Innovative incentives from other nations, especially from England and the United States, are presented in addition to those currently available in Canada.

Incentives can be classified in one of three ways: (1) the career stage at which a teacher is eligible; (2) what the incentive rewards; or, (3) what issue(s) the incentive hopes to address.

Incentives that Affect Teachers at One or More Stages of their Career

Figure 8.4 - Incentives by Stages

Incentives by Stages

Incentives can be classified by the stage in the teacher's career at which the incentive becomes available:

Stage 1- pre-service recruitment
Stage 2- pre-service teacher preparation program
Stage 3- acceptance of employment offer – initial and return to profession
Stage 4- teacher's participation in active teaching force
Stage 5- retirement or resignation from teaching force

[13] British Columbia Teachers' Federation. (2001, Spring). The Teacher Shortage, *Teacher Newsmagazine*, 13(6).

In times of high teacher supply, incentives are not usually offered at stages 1 –3. However, with the perceived shortage of teachers, many of these incentives are now being implemented depending upon the local supply and demand of a district, region or country. When there are a lot of older teachers in the teaching force, many jurisdictions offer retirement or resignation incentives. Few incentives are offered to Canadian teachers after accepting employment and before leaving the teaching force. This appears strategically short-sighted as these are the years where teachers spend most of their working life (often 35 years). The availability of incentives at all stages of a teacher's career would reinforce the lifelong learning that is essential for "learning communities" and help ensure the appropriate distribution of teachers to maximize student learning.

Recruitment and Return to Profession Incentive Examples (Stages 1-3)

This category of incentives is designed to attract high quality candidates to the teaching profession by helping with their teacher preparation program costs or by providing additional remuneration at the outset of the teacher's career. Incentives include student teaching stipends, scholarship and bursary programs[14], tuition-rebate programs, signing bonuses, and forgivable loans.

Some view alternative certifications as the ultimate in recruitment incentives, as paraprofessionals, mid-career people and others are offered a shortened method to access the teaching profession thus saving years of study, tuition fees and lost wages.

Active Participant in the Teacher Workforce Incentive Examples (Stage 4)

For the majority of their career, teachers are in Stage 4. Three types of recognition are relevant for teachers actively employed in the classroom: compensation for additional training, compensation for additional time and/or responsibilities, and incentives to accept hard-to-staff assignments (see Figure 8.5)

Compensation for Extra-curricular Activities

Unlike some countries, Canada does not compensate teachers for extra-curricular activities. While not currently a Stage 4 incentive, it may prove benficial to expand the role of teaching to specifically require certain types

[14] In Great Britain £6,000 bursaries are offered for those embarking on teacher training and training salaries pay people £12,000 to learn on the job. *The Times Educational Supplement*, (2000, October 20). Retrieved from www.tes.co.uk Teacher Shortage (2000, May). *Dossier of International Education Magazine*, p. 13.

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of extra-curricular activities and increase overall compensation accordingly. Research suggests that participation in extra-curricular activities can engage students in their learning and benefit their entire school experience (Otto, 1975; Trent & Braddock, 1992). This is thought to be especially important for students from less advantaged backgrounds.

Figure 8.5 - Incentive Examples in Stage 4

Incentive Examples in Stage 4

Recognition of additional training and ongoing professional development examples include:

- forgivable loans for upgrading
- C.E.U. (continuing education unit) assistance
- bonus for certification such as NPTBS
- income tax credits (including deductions for professional materials/courses)
- retraining programs
- enhanced professional development opportunities
- mentoring/professional support programs
- paid sabbatical leave

Recognition of additional time and/or responsibilities examples include extra compensation for:

- curriculum development
- mentoring responsibilities
- extended day
- extended year
- participation in professional development activities
- extra-curricular activities

Recognition of the nature of the teaching assignment examples include:

- different types of hard-to-staff incentives

Hard-to-Staff Assignment or School Incentives (Stages 3 – 4)

Assignments can be hard to staff for one or more of the following reasons: geographic location of the district; geographic location of a specific school or program; type of school; scarcity of subject specialists, e.g., mathematics and science specialists; and, composition of student population served. These types of assignments can be found in every country. In France, teachers

who commit to five years at a "priority zone of teaching" receive extra compensation and are guaranteed acceleration.[15] In a survey of North Carolina teachers to determine what it would take to entice them to teach in low-performing schools, only 30% [of respondents] indicated a willingness to accept such a challenge, even if incentives were offered. Salary bonuses were deemed important,[16] but clearly were not sufficient. What mattered most were smaller class sizes, strong administrator support, extra planning time, and instructional support personnel.[17] In England, "welcome back" bonuses of £2,000 were paid to entice teachers back to the classroom. This bonus increased up to £4,000 if the teacher was qualified in an identified shortage area.[18] Other incentives districts use to address the hard-to-staff issue are: northern or remote and relocation allowances in Canada; allowing retired teachers to return to teaching for specified time periods without losing pension benefits; free or subsidised housing, e.g., teacherages; the Teacher Next Door (TND) program[19], reduced mortgage/bank loans, e.g., "starter home initiative" in England[20]; bonuses to employees who recommend certified teachers, tuition scholarships for master's degrees for teachers who move to critical shortage area; and funding the option for schools to have increased professional development days and instructional days.[21]

[15] Bodin as quoted in Stoel, C. & Thant, T-S. (2002, March 18). *Teachers' Professional Lives: A View from Nine Industrialized Countries*. Washington, D.C.: Council for Basic Education – Mideen Family Foundation, p. 13.

[16] "South Carolina's teacher specialist program offers an annual bonus of up to 50% of the regional average salary to highly qualified teachers who serve in a high-need school for at least three years. Yet, three weeks after the deadline, only 115 teachers had applied to fill 500 slots for the 2000-1 school year." The Southeast Center for Teaching Quality. Recruiting Teachers for Hard-to-Staff Schools: Solutions for the Southeast & the Nation. The University of North Carolina – A Regional Office of the National Commission on Teaching and America's Future. January 2002, p. 7.

[17] The Southeast Center for Teaching Quality. (2002, January). *Recruiting Teachers for Hard-to-Staff Schools: Solutions for the Southeast & the Nation*. The University of North Carolina – A Regional Office of the National Commission on Teaching and America's Future, p. 5.

[18] Teacher Training Agency. (2001, March 26). *New Drive to Bring Former Teachers to the Classroom* (press release).

[19] The Teacher Next Door (TND) program is designed encouraging teachers to buy homes in low and moderate-income neighbourhoods within the boundaries of their school system. For example, a teacher, upon qualifying, can get a 50% discount on a HUD-owned, one family home in a designated Revitalization Area. If a HUD home is listed for $100,000, a teacher can buy it for $50,000 and apply for a FHA-insured mortgage with a down payment of only $100. U.S. Government. Retrieved from http://www.hud.gov/offices/hsg/sfh/reo/tnd/tnd.cfm

[20] *The ABCs of Teacher Demographics. Report of the findings of a situational analysis of Canada's education sector human resources*. (2002, January). CAETO: The Steering Group for the Situational Analysis of Canada's Education Sector Human Resources., p. 85.

[21] The Southeast Center for Teaching Quality. (2002, January). *Recruiting Teachers for Hard-to-Staff Schools: Solutions for the Southeast & the Nation*. The University of North Carolina – A Regional Office of the National Commission on Teaching and America's Future, p. 11-12.

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Retirement or Resignation Incentives (Stage 5)

Incentives in the latter part of a teacher's work cycle can include early-retirement incentive plans and improved retirement benefits. Financially there is a differential between the salaries of the beginning teacher and the teacher they are hired to replace. But more importantly, educationally there is the opportunity to retain teachers with much lower seniority but essential skills during times of fluctuating budgets or student populations. The rehire portions of the layoff/ rehire cycles are times when junior teachers are aggressively recruited by other jurisdictions. Early retirement plans can help in the retention of teachers with qualifications in hard-to-staff subjects, which allows districts to reduce out-of-assignment teaching.

Issues Incentives Usually Address

Incentives usually address one of three major categories of issues. The first is *who goes into teaching in the first place and who stays*. This category relates primarily to recruitment and retention concerns and is described by Hassel (2002) as *compositional effects*. The second category is *distribution of teachers effects*. Such incentives are designed to help ensure the appropriate placement of teachers to ensure optimum student achievement. The third and final category addresses *how teachers teach and how they develop their teaching capabilities over time*. This category is called *behavioural effects*.[22] From this analysis it would appear that skilfully selected and applied incentives have powerful potential to influence teacher quality. We now examine each category in more detail.

Compositional and Distribution Effects

Hassel would classify incentives for hard-to-staff Math and Sciences positions, as a compositional effect, as it makes it easier to put qualified teachers in the classroom and reduces out-of-field teaching. If the incentive, a signing bonus or pay increment, was a one-time event, it may not help with retention. An ongoing increment may help with retention but has not been proven to effect teachers' behaviour in the classroom.[23] A hard-to-staff incentive or differential pay to encourage teachers to relocate to more challenging or hard-to-staff schools primarily affects the distribution of teachers, but again has not been proven to influence teachers' behaviour in the classroom.

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[22] Hassel, B. C. (2002, May). *Better pay for better teaching: Making teacher compensation pay off in the age of accountability.* Progressive Policy Institute: 21st Century Schools Project, p. 4 and 15.

[23] Ibid., p.14.

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Behavioural Effects

Teachers will focus on the capabilities rewarded by the system. Unlike the traditional pay scale, a knowledge-and skills-based system provides an explicit incentive for teachers to continuously improve their teaching abilities. The aim of this type of incentive is to change teacher behaviour by increasing routine use of knowledge and skills and effective teaching practices in their classrooms. It would be difficult to measure these resulting changes, however, without assessing teachers on their everyday practice and results instead of isolated demonstrations as is common practice in traditional evaluation models.[24]

A well-implemented knowledge-and skills-based salary system might improve the composition of the teaching force in three ways: (1) people who believe they have or have the ability to quickly acquire the explicitly valued capabilities are more likely to become prospective teachers as they would be eligible for increased earnings faster, (2) these same people would be more likely to remain in teaching as they perceive their contributions are valued and rewarded intrinsically and extrinsically, and (3) those teachers who do not demonstrate the valued capabilities will find teaching less lucrative and satisfying and will be more inclined to seek other employment.[25]

Recognition of Teacher Performance by Incentives

According to one estimate, roughly 10 per cent of all districts in the nation [United States] use some form of incentive pay.[26] Incentive pay structures can reward two types of elements: pay based on a teacher's knowledge and skills and individual or group bonuses linked to school performance.

Merit Pay

Pay for performance as it is now being implemented should not be confused with an earlier experiment called merit pay or pay-by-merit. Many negative features caused merit pay's demise. Merit pay set teacher against teacher to compete for a limited fund of money and was open to subjective evaluation and possible abuse. Teacher organizations often have a policy

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[24] Hassel, Bryan C. (2002, May). *Better pay for better teaching: Making teacher compensation pay off in the age of accountability.* Progressive Policy Institute: 21st Century Schools Project, p.10-11.

[25] Ibid., p.10-11

[26] National Governors' Association. (2001). *Rewarding Teacher Quality: An Investment in the Future.* Retrieved [illegible] http://www.subject.org/orgs/nga/cpp/hppnt.htm

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statement vetoing merit pay.[27] Performance incentives differ from merit pay in that all teachers can earn salary increases when they acquire new skills and knowledge, and the eligibility for an increase is determined by demonstration of performance to a specific standard. The evaluation is objective and not subject to administrator bias.[28]

Performance Incentive Plans

Performance incentive plans can be paid to individual teachers; to staffs as a whole; or in the form of funds to be used at the school level. These plans vary greatly in their implementation in different jurisdictions.[29] However, successful plans usually have the following elements or characteristics: a clear statement of what performances are most valued; a clear statement of assessment including the use of a range of objective measures; provision of awards that are valued by teachers; stable funding to fulfil the needs of the incentive program; and the cooperative development of the plan by stakeholders to meet local needs.

Cooperative Performance Incentive Plans

While many plans still reward individual teachers, Cooperative Performance Incentive plans (CPI) are more promising systems designed to develop a greater sense of community. CPI plans may be defined *as award programs which provide teachers and often other school staff with pay bonuses for the achievement of specific school-wide educational objectives.*[30] The first pilot was in South Carolina in 1984, but CPIs in various forms are now implemented in many locations in the United States and England.

While CPIs do not yet exist in Canada, there are recent initiatives to financially recognize achievement of school or district-wide educational objectives. The Alberta Initiative for School Improvement (AISI) was introduced in 1999 to give school boards special funding to implement research-based improvement strategies to achieve specific measurable targets selected by the district. Another Canadian innovation is the 1999 pilot performance incentive agreement for Aboriginal funding between the Kamloops/Thompson school district and the province of British Columbia.[31] In June 2002 the

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[27] Ontario Secondary School Teachers' Federation, *OSSTF Policy Statements*. Policy 4.16, Pay-for-Merit- Collective Bargaining Salary (CBS Policy).

[28] Wilson, A. (2001, Spring). Defining Merit. *Education Matters*, p. 20.

[29] For teacher compensation information by state view Consortium for Policy Research in Education (CPRE) at http://www.wcer.wisc.edu/cpre/topics.html or their case study web page at http://www.wcer.wisc.edu/cpre/research/kasbo/kasbo.asp

[30] Gaffney, C., Hensman, P., and Miaszewski, A. (1999, April). *School-based performance awards*. Paper presented at the Annual meeting of the American Educational Research Association, Montreal, Canada.

[31] Adams, H. (2000). Cooperative Performance Incentive Plans. *Peabody Journal of Education*, 75(4), p.149.

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Ontario government announced the creation of the $20 million Student Achievement Fund, whose first initiative is to provide $5,000 to every elementary school who meets or exceeds its student literacy goals in Grade 3. *The principal, in consultation with the School Council, will be able to invest in their local initiatives that further improve student learning in that school.*[32]

While we do not have conclusive evidence of *a direct correlation between teacher motivational responses and actual school success in meeting student achievement goals*, research suggests that *the positive awards associated with the [CPI] program may contribute to school performance and influence teachers' attitudes*. More research is required as to the effects of CPIs and how they can be most effectively implemented to benefit student achievement in schools at all points on the performance continuum.[33]

All of this research makes one point abundantly clear: No one should regard pay reform as some kind of "silver bullet" that can, by itself, overcome our teaching quality challenges. Improving the effectiveness of teaching requires multifaceted policy development, encompassing preparation, recruitment, selection, professional development, working conditions, and evaluation.[35]

Restructuring of Compensation and Incentives

Figure 8.6 - Seven Reasons to Change Teacher Compensation

Seven Reasons to Change Teacher Compensation (Odden, 2000)

1. Teacher salary increases are often not linked to organizational needs.
2. The public feels the teacher compensation structure rewards mediocrity; changing teacher compensation can reassure the public that we value teacher performance.
3. We need mechanisms to stimulate teacher development of knowledge and skills to teach the new curriculum standards (for me being promulgated by professional content groups.
4. Historically, changes to teacher compensation have followed changes in compensation methods for other types of employees.
5. New forms of compensation can support the trend in education to identify, develop and recognize accomplished professional practice.
6. New forms of teacher compensation can support standards-based reform.
7. New forms of organization, teams, site-based management, networking unit, etc., suggest new ways to organize and manage schools.

[32] Ecker, Hon. (2002, June 17). Budget Speech by Minister of Finance. Ontario Government, p. 18.

[33] Raham, H. (2005). Comparative Performance Incentive Plans. *Peabody Journal of Education*, 75(4), p. 17–32.

[34] Odden, A. (2000). Seven *Reasons to Change Teacher Compensation*. CPRE Brief.

[35] *Hassel, B. C. (2002). More Bucks pay for better teaching: Making teacher compensation pay off. The role of accountability. Progressive Policy Institute: 21st Century Schools Project*, p. 3.

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It's time to move beyond a pay method designed early in the last century and to begin building an innovative system that addresses the realities of public schools in the 21st century.[38]

The current pay system for teachers, based on years of experience and education, originated early in the last century and mirrored what was happening at the time in the public service and in parts of the private sector. This system was introduced to achieve parity for workers based on objective measures instead of factors such as gender.

To address the needs of the 21st century Hassel comments that an innovative pay system would include these reforms which appear to make sense but which are perceived as controversial by many in education:

- *providing higher pay or bonuses for teachers who take on tough school assignments;*
- *paying more to teachers in certain disciplines, such as math and sciences;*
- *paying for demonstrated knowledge and skills, rather than only experience and degrees;*
- *tying rewards to the student learning achieved by a teacher, group of teachers, or school; and*
- *giving school leaders more authority to set teachers' pay.*[36]

While Hassel outlines different pay proposals, he suggests piloting different approaches to determine what works and what does not work. He predicts that even after considerable research there probably would not be a single best way to pay teachers. Research in the private sector has shown that pay systems need to be aligned with the organization's culture. While schools and school districts have common elements of culture, there is also much uniqueness. Hassel says *we need a pay system that allows leaders to use compensation as one of many tools in alignment with their broader strategies to increase student performance via quality teaching.*[37]

Hassel recommends these principles in the development of innovative pay systems: widespread experimentation; flexibility with accountability at the school level; fairness, e.g., no reductions of current salaries to finance the new systems but instead increased and more effective compensation; an intense focus on results; alignment with broader school improvement strategies *as well as comprehensive "human resources" policies including organizational design, recruitment, selection, goal setting, professional development, school culture, and evaluation;* and rigorous documentation and evaluation of innovative pay systems and *their effects on teacher recruitment, retention, practices, and effectiveness in raising student achievement.*[38]

[36] Hassel, B. C. (2002, May). Better pay for better teaching: Making teacher compensation pay off in the age of accountability. *Progressive Policy Institute: 21st Century Schools Project*, p.2.
[37] Ibid., p.3.
[38] Ibid., p.3.

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A review of the literature suggests that we should recognize and nurture the lifelong development of teacher expertise throughout their teaching career in a professional learning community. Linking teacher performance to a revised compensation structure would recognize in a visible manner the value we attach to their contributions.

If we believe in the potential of increasing teacher expertise throughout the entire career span, the financial recognition system would not automatically reach its maximum after 9-12 years of teaching experience. Nor would teacher compensation be automatically increased as a function of longevity in the profession without participation in ongoing development and demonstration of increased proficiency. This requires a significant shift in the teacher compensation paradigm that will be challenging to implement at this time for a number of reasons.

Firstly, teacher unions in Canada[41] oppose differentiated compensation for their members, although some TURN and other union locals in the United States have begun implementing some aspects of performance-based compensation.

Secondly, Canada has not yet utilized multi-year comprehensive student achievement data in order to measure teacher effects on learning or value-added achievement gains. Even where such data are available we do not yet have a culture within the public education system that fully recognizes its potential value. Value-added assessment is, however, increasingly recognized as an objective measure of teacher effect[42] as one of the factors in determining appropriate compensation.

A third obstacle is increased costs. Compensation to teachers and schools, establishment of effective staff development programs, and establishment and ongoing monitoring of evaluation and compensation determination structures will require additional funding.[43] This prospect is not palatable during a time of fiscal restraint in Canada.

Some TURN locals including Minneapolis, Toledo, Denver, and Los Angeles *offer other opportunities for compensation differentials within the context of the teaching work itself. Pay for performance, the most controversial and significant compensation change... is differentiated from merit pay, which is seen as being prone to administrative bias. Pay for performance is tied to student achievement parameters, measured via tools that are agreed to in advance. The pay increments can be paid to the whole school or to individual staff, and can be paid as cash for personal use or can take the form of additional funding for the school.*[39]

What might be called the reverse of pay for performance is also practised in some districts. In Rochester, regular increments are withheld if teachers receive poor evaluations until their ratings improve.[40]

[39] Litzcke, K. (2001). *Teacher Unions as Players in Educational Reform: A Canadian Look at an American Trend*. Kelowna: Society for the Advancement of Excellence in Education, p. 20.

[40] Ibid., p. 21.

[41] "The single salary schedule based upon a preparational scale is the most equitable salary administration policy [...] in establishing professional remuneration." Statement of Educational Policy. Alberta Teachers' Association, as retrieved on http://www.[illegible]policy.cfm?p_ID=39.

[42] Stronge, J. & Tucker, P. (2006). *Teacher Evaluation and Student Achievement*. Student Assessment Series (G. Cizek, Ed.). Washington, DC: National Education Association.

[43] Odden, A. & Kelley, C. (1995, September). *Reinventing Teacher Compensation Systems*. CPRE Finance Brief.

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In spite of these challenges, Canada may benefit from new ways of compensating its teachers. Linking teacher compensation with productivity, e.g., student achievement and teacher contributions to the school may bring significant desired benefits to the system. Although there may be no single perfect design for teacher compensation, Hassel suggests *we should seek improvement relative to the status quo. We should ask: Would this change do a better job of contributing to our teaching quality goals than the current system does?*[44]

[44] Hassel, B. C. (2002, May). *Better pay for better teaching: Making teacher compensation pay off in the age of accountability.* Progressive Policy Institute: 21st Century Schools Project, p.9

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IX Policy Implications

Now more than ever, research is showing what works and what works well. The challenge is one of alignment: bringing development practices into step with the practical needs of teachers; making state policies and school structures support effective teacher learning; and creating both the external expectation and self-perception of teachers as learning professionals who will continue to grow throughout their careers.[1]

Fullan suggests we are talking about no less than *reculturing the teaching profession, the process of creating and fostering purposeful learning communities. Teachers and unions must take a lead role in asking what kind of culture do we have, what do we want, and how do we get there.*[2] Adam Urbanski and other progressive teacher leaders also believe the union must assume new responsibilities for the quality of the teaching force. And while *teachers and principals must reculture their schools, so must administrators work on reculturing their districts.*[3] Universities must re-examine and strengthen their teacher preparation programs. Finally, governments must re-align their policies to promote productivity and the capacity for excellence at each level of the system.

Recommendations

The following recommendations would support purposeful learning communities and quality instruction in Canada's public education system. They suggest directions rather than prescriptive solutions, to be applied with local adaptations, so that students in every classroom have access to high quality learning opportunities.

[1] Darling-Hammond, L. (1999) *Professional Development for Teachers: Setting the Stage for Learning from Teaching.* Santa Cruz, California: The Center for the Future of Teaching and Learning, p. 18.

[2] Fullan, M. (2001) *The new meaning of educational change (third edition).* Toronto, Ontario: Irwin, p. 136.

[3] Ibid., p. 1

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These recommendations are based upon two fundamental assumptions. The first is that teaching quality in Canada is so important to teachers, school districts, teacher training institutions, governments and the public, as all desire the best possible education for our youth, that these individuals and groups can set aside historical precedents to explore new routes to enhance teacher quality in the new millennium. The second assumption is that full utilization of many types of performance feedback, including value-added student achievement data, is necessary to guide teaching practice and to furnish one criteria for innovative teacher evaluation and compensation plans.

Research - Data Quality to be Improved

To facilitate better decision making, more comprehensive and up-to-date data is required. Statistics on teacher attrition rates and causes, out-of-field assignments, voluntary versus involuntary part-time employment, and current supply and demand scenarios would allow strategic policy and human resource planning as well as providing a benchmark to measure whether these policies were successful in facilitating a quality teaching force.

Teacher Preparation – Evaluation of Programs for Quality

To ensure initial teacher quality, teacher preparation program institutions in co-operation with teachers' colleges, teachers' associations, school districts and the government must continually evaluate their content, delivery methods, and exit criteria. Programs and their delivery should be based upon research and practice and reflect the realities of the working environment of teachers so that teacher preparation institutions can guarantee the effectiveness of their graduates in today's challenging classroom.

Mentoring - Reculturing Teaching

Mentoring must develop beyond a hierarchical one-on-one relationship for struggling teachers and become a component of the culture of teaching. Induction programs for beginning teachers and teachers new to a district

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should be mandatory, but programs for teachers at all stages of their career should become an integral part of the ongoing professional development with recognition given to the master teachers.

Hiring and Assignment Practices – Organizing for Quality Assurance

Hiring and assignment practices require a collaboration between school districts, governments, and teachers' associations to move from an industrial collective agreement model to one that focuses on organizing for professional competence and quality assurance, flexibility and increased productivity similar to the concepts of the "new unionism".

Professional Development – Opportunities for Quality Development

Professional development should be on going, school-embedded, and evaluated as to its efficacy on supporting and improving instruction. Increased resources should be provided for shared inquiry into practice, structured school-focused opportunities for teachers to analyze current research and reflect with others on how to improve their practice, similar to the lesson study concept in Japan. Recognition of the year round schedule of teaching may permit teachers greater access to longer professional development sessions.

Evaluation – Instructional Quality Recognition and Control

Evaluation processes should be based on established criteria applied consistently on a regular basis in order to recognize teacher quality and to monitor teacher performance. A profession is defined by many criteria and one is the capacity to evaluate and remove from the profession those practitioners whose performance is below standard. Peer review programs may expedite these processes.

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Compensation – Incentives for a Quality Teaching Force

Cooperative performance incentives to recognize teacher performance and other incentives to address composition, distribution and behavioural effects should be explored to supplement the current single salary scale. The structure of compensation in teaching, not significantly changed in over 80 years, should mirror the compensation patterns of many other occupations in society. They have been increasingly basing components of an individual's compensation on criteria related to productivity and/or application of specialized skills and knowledge.

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